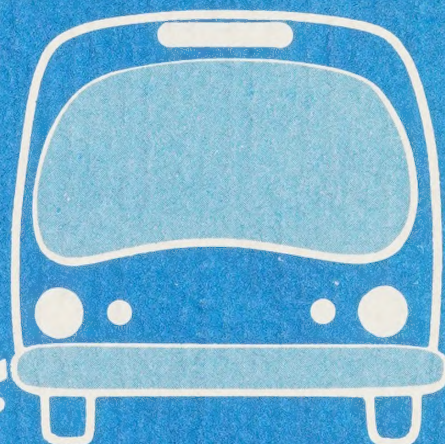


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regional elderly & handicapped plan



prepared by:



THE METROPOLITAN TRANSPORTATION COMMISSION



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Regional
Elderly and Handicapped
Plan

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Metropolitan Transportation Commission
Berkeley, California

Adopted July 25, 1979

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MTC Regional Elderly and Handicapped Plan

Table of Contents

	<u>Page</u>
List of Acronyms and Abbreviations.....	iv
I. Introduction	1
A. Purpose	1
B. Scope	2
C. Role of MTC	3
II. The Legislative Mandate	7
A. Urban Mass Transportation Act	7
B. 1976 Regulations	9
C. The 504 Regulations.....	12
D. California State Law.....	14
E. MTC Regional Policies.....	15
F. MTC Policy 4.5.....	19
III. Analysis	21
A. Demographics	21
1. Population.....	21
2. Methodology of Estimation Update.....	33
3. Geography and Urbanization	34
B. Vehicle Accessibility	37
1. Introduction	37
2. BART.....	39
a. Description.....	39
b. Analysis.....	39
c. Conclusions.....	40
3. Fixed Route Services.....	43
a. Technology and Description.....	43
b. Analysis.....	45
c. Conclusions.....	45
4. Demand Responsive Services.....	46
a. Technology and Description.....	46
b. Analysis.....	47
c. Conclusions.....	48
5. "Problem Areas".....	48
a. Rail Service.....	48
b. Unincorporated Areas.....	49
C. Transit Needs and Services Provided.....	53
1. Purpose.....	53
2. Regional Overview.....	53
a. Current Ridership.....	53
b. Analysis.....	54
3. Detailed Analysis of Wheelchair - Accessible Services.....	56
a. East Bay.....	56
b. South and West Bay.....	59
c. North Counties.....	62
4. Conclusions.....	63

	<u>PAGE</u>
D. Outreach, Support Services, and Passenger Amenities.....	67
1. Description.....	67
2. Analysis.....	68
a. Region-wide Activities.....	68
b. Specialized Operator Activities.....	70
3. Conclusions.....	71
E. Public Participation and Coordination.....	75
1. Introduction.....	75
2. Citizen Advisors to Operators.....	75
3. Citizen Advisors to MTC.....	76
4. Paratransit Coordination.....	77
5. Conclusion.....	78
F. Technical Studies.....	81
1. AC Transit.....	81
2. Marin County.....	83
3. Sonoma County.....	85
4. Napa County.....	87
5. San Francisco Muni.....	89
a. Muni Metro Accessibility Study.....	89
b. Elderly and Handicapped Study.....	90
6. BART.....	90
a. BART Impact Program.....	91
7. PENTAP Transit Dependent Study.....	91
IV. Evaluation.....	95
A. Introduction.....	95
B. Goals & Objectives.....	96
1. BART.....	96
2. Buses.....	97
C. Deployment Plans and Supplemental Services.....	98
1. AC Transit Service Area.....	98
2. Santa Clara County.....	99
3. Other Operators' Strategies and Plans.....	101
4. Conclusion.....	103
D. Funding Expenditures.....	104
V. Recommendations.....	109
A. General.....	109
1. one-year.....	109
2. five-year.....	110
B. MTC Policies and Programs.....	112
C. Bus Accessibility and "Interim Services".....	113
D. Individual Operators.....	115

MAPS

1. Density of Elderly Population - Regional Overview....	25
2. Density of Elderly Population - Central Bay Area.....	27
3. Density of TH Population - Regional Overview.....	29
4. Density of TH Population - Central Bay Area.....	31
5. Accessible Public Transportation - Current & Proposed.....	41

TABLES

Page

1. Estimated 1979 County Populations for the Bay Region.....	33
2. Daily Transit Ridership in the Bay Region (June 1979).....	55
3. Changes to Transit Service Desired by TH Persons.....	58
4. Expenditures for E&H Services by Bay Region Transit Operators.....	105
5. Timetable for USDOT 504 Regulations.....	111

APPENDIX

1. Resolutions of the Metropolitan Transportation Commission Relating to Transportation for the Elderly and Handi- capped.....	119
2. Chronology of E&H Developments (Federal, State & Regional)..	121
3. Wheelchair-Accessible Public Transportation in the Bay Region.....	131
4. Handicapped and Senior Citizen Advisors to MTC Commissioners	137
5. Social Service Agencies that Own Wheelchair Accessible Vehicles.....	139

ACRONYMS and ABBREVIATIONS

Used In This Report

AC Transit	Alameda - Contra Costa Transit District
ADB	Advanced Design Bus
BART(D)	Bay Area Rapid Transit (District)
CAC	Citizen Advisory Committee
Caltrans	California (state) Department of Transportation
CIL	Center for Independent Living (Berkeley)
CFR	Code of Federal Regulations
DAR	Dial-A-Ride
DRT	Demand - Responsive Transportation
E&H	Elderly and Handicapped
FHWA	Federal Highway Administration
GGBHTD	Golden Gate Bridge, Highway, and Transit District
HEW	(U.S. Department of) Health, Education, and Welfare
JEPA	Joint Exercise of Powers Agreement
LTF	Local Transportation Funds (Calif.)
LRV	Light Rail Vehicle
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
MUNI	(San Francisco) Municipal Railway
PENTAP	Peninsula Transit Alternatives Project
RSS	Remotely Staffed Stations (BART)
RTP	Regional Transportation Plan
SamTrans	San Mateo County Transit District
SF-PUC	San Francisco Public Utilities Commission
SP	Southern Pacific Transportation Company
SRTP	Short Range Transit Plan
TDA	Transportation Development Act (Calif.)
TE-1	Transit Elevator-Model 1 (Santa Clara County)
TIP	Transportation Improvement Program
TSC	Technical Support Committee
TSM(E)	Transportation Systems Management (Element)
TTY	Teletypewriter
UMTA	Urban Mass Transportation Administration
USDOT	U.S. Department of Transportation
WW	Whistlestop Wheels (Marin County)

I. INTRODUCTION

A. Purpose

The purpose of the Regional Elderly and Handicapped (E&H) Plan for the San Francisco Bay Area is four-fold:

1. To document the special efforts to date in planning service to elderly and handicapped persons "that meets a significant fraction of the actual transportation needs of these persons;"¹
2. To analyze and evaluate current and proposed E&H transportation services in order to assess the extent of their effectiveness;
3. To define regional directions in E&H planning and implementation that will bring about a reasonable level of transit accessibility in an efficient and effective manner;
4. To fulfill the Urban Mass Transportation Administration (UMTA) 1978-79 criteria for regional planning certification and for capital grant eligibility for local transit operators.

The Regional Transportation Plan (RTP), first adopted by the Metropolitan Transportation Commission (MTC) in 1973 and updated annually, notes in both its Declaration of Intent and its Objectives and Policies, the Commission's concern with the mobility needs of elderly and handicapped persons. Within the overall direction of the RTP, the Regional E&H Plan serves as a basis to develop specific directions for improvement of transit accessibility and mobility by E&H persons. It is intended to become the foundation of a regional Transition Plan for the implementation of recent U.S. Department of Transportation (USDOT) "504" regulations. The Regional E&H Plan also provides a basis for each transit operator's E&H component to its 5-year Short Range Transit Plan (SRTP).

1. Advisory Appendix to 23 C.F.R. Part 450, Subpart A(4).

B. Scope

The terms "elderly" and "handicapped" are usually used collectively in this report to denote persons who have somewhat similar needs, particularly regarding mobility, in using public transit. While many of those who are designated as "E&H" prefer being referred to as "senior" or "disabled," the statutory phraseology of "elderly and handicapped" will be used herein for consistency.

Federal statutes defines "handicapped person" as one who "by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability, including any person who is wheelchair bound or has semiambulatory capabilities, is unable without special facilities or special planning or design to utilize public transportation facilities and services effectively."²

There is no similarly consistent classification for "elderly," however, which may be defined by various transit services as beginning somewhere between the ages of 55 and 65. The population projections in this report are based on age 60 as elderly, for easier comparison with census and planning data.

The Regional E&H Plan addresses the needs of such mobility-handicapped persons with respect to the following areas:

1. Access to public transit vehicles
2. Local efforts in providing accessible transit systems that match E&H travel needs
3. Alternative ways to provide mobility
4. Public participation in planning and implementation
5. Joint planning among operators and agencies offering E&H services
6. Regional objectives and directions for the E&H program.

2. Surface Transportation Assistance Act of 1978, PL 95-599, 49 USC 1604

C. Role of MTC

MTC's role in the Regional E&H program is similar to that for general transportation in that MTC provides:

1. A regional forum for defining an overall direction of transportation service for E&H passengers;
2. Encouragement and financing of operator-level planning and experimentation to determine the best match of transportation services for a particular service, consistent with the regional framework;
3. Review and approval of capital and operating grant applications for state and federal funding that meets regional objectives and policies.

MTC has very closely paralleled the evolution of federal regulations and guidelines regarding planning and programming for E&H persons, and subsequently this region is abreast or ahead of all current requirements. The 1976 UMTA regulations on "Transportation for Elderly and Handicapped Persons,"³ while still in draft form, encouraged MTC to adopt Resolution No. 299, which in turn provides for each transit operator to undertake special planning for E&H transportation services. The operator-level planning, rather than overall planning at the regional level by MTC, was expected to best fulfill the "local efforts" intent of this regulation. MTC provided its own general planning funds for these studies, rather than relying on UMTA monies, to minimize delay in completing these efforts. These studies have now been completed and are incorporated as a component of the operators' 5-year SRTPs.

- A further response to the UMTA requirements on citizen participation in the planning process was MTC Resolution No. 316. Under this resolution, each MTC Commissioner has appointed a senior advisor and a handicapped advisor on matters relating to transportation needs.

The 1976 regulations also resulted in MTC Resolution No. 467, which provides

3. Final Rules published in April 30, 1976, Federal Register

that the Commission's approval for bus purchase projects will be contingent upon these buses being wheelchair accessible. This resolution anticipated many provisions of the recent "504" regulations. Yet another proposed UMTA policy⁴ triggered MTC Resolution No. 468, which provides for establishment of a paratransit coordinating council (PCC) within each county to coordinate social service agencies' transportation services and to link these services to the fixed-route system. The PCCs also provide a countywide forum to develop and review UMTA 16(b)(2)⁵ and TDA Article 4.5⁶ programs. MTC Resolution No. 679, adopted in June, 1979, provides a coordinating mechanism for MTC and PCC review of such TDA Article 4.5 funding claims within each urbanized county in the Region.

The combination of Resolution Nos. 467 and 468 has shown the Commission's intent to sustain what was described in MTC's Special Transit Needs Study (1975) as the Region's "four-tiered" transit network. Each element of the integrated system should be accessible to all potential passengers:

1. Long haul rapid transit, commuter rail, express bus, and ferry;
2. Local fixed-route bus and streetcar;
3. Public carrier demand-responsive vehicles;
4. Social agency paratransit.

MTC has worked in partnership with transit operators, local governments, and social agencies to keep this region a forerunner in E&H program development and is committed to providing efficient and effective transportation service to the general public, as well as to E&H persons. This document explains and furthers those efforts.

4. "Paratransit Services," October 20, 1976, Federal Register

5. Provides federal assistance to private, non-profit organizations to purchase transit vehicles.

6. California State law which allows up to 5% of an urbanized county's Local Transportation Funds (LTF) to be allocated for "Community Transit Services."

II. THE LEGISLATIVE MANDATE

A. Urban Mass Transportation Act of 1964, As Amended

The basic statute, which provides planning and funding support for public transit operators, is the Urban Mass Transportation (UMT) Act of 1964.⁷ This Act has subsequently been amended several times, most extensively in 1970 and 1974. MTC has been designated as the Metropolitan Planning Organization (MPO) for coordinating assistance programs under the UMT Act within the Bay Area.

Among the Congressional findings of the UMT Act was the need to increase mobility of people and goods within the "rapidly expanding metropolitan and other urban areas." The intent of the UMT Act is to encourage the planning establishment and development of area-wide urban transportation systems, facilities and methods.

Much of the UMT Act details procedures and resources for funding allocations.

Among the more frequently invoked provisions of the current Act include:

Section 3	Capital Assistance Program
Section 5 (Revised 1974)	Operating Assistance
Section 6	Research, Development and Demonstration Projects
Section 8 (Added 1966)	Technical Studies and Planning Assistance (formerly Section 9)
Section 15 (Added 1974)	Uniform Reporting System
Section 16 (Added 1970)	Planning and Design for the Elderly and Handicapped
Section 18 (Added 1978)	Formula Grants for Areas Other Than Urbanized Areas (Rural Assistance)

In 1970, the UMT Assistance Act (PL 91-453) added Section 16, wherein Congress:

"hereby declared to be the national policy that elderly and handicapped persons have the same right as other persons to utilize mass transportation facilities and services so that the availability to elderly and handicapped persons of mass transportation, which they can effectively utilize will be assured; and that all Federal programs offering assistance in the field of mass transportation...should contain provisions implementing this policy." (Emphasis added)

7. Public Law 88-365, 49 U.S. Code 1601 et seq.

During the early 1970's, UMTA grant guidelines required applicants to describe their "reasonable efforts" toward accessibility through studies, plans and special programs that addressed the needs of the elderly and handicapped. However, since these were "merely" guidelines, the legal status of interpreting and applying Section 16 remained rather nebulous for several years. By one estimate, only 10% of the planning for urban areas during 1974 considered E&H needs to any extent.⁸

The 1975 Joint Regulations, by the Federal Highway Administration (FHWA) and UMTA, on Planning Assistance and Standards⁹ were the first concrete steps toward the modification of requirements of E&H transportation programs. These require the urban transportation planning process to develop a plan containing (1) a Transportation System Management (TSM) element and (2) a long-range element, which are then implemented through (3) a Transportation Improvement Program (TIP) for each urbanized area. Specifically, the planning process must "include special efforts to plan public mass transportation facilities and services that can effectively be utilized by elderly and handicapped persons".¹⁰

The TSM element is intended as a low-capital series of actions which must "provide for the short-term transportation needs of the urbanized area by making efficient use of existing transportation resources."¹¹ The Advisory Appendix includes a list of "actions to be considered" for the TSM element. Some of the suggested improvements that can be of direct benefit to elderly and handicapped (as well as other) passengers include:

- greater flexibility and responsiveness in routing and scheduling;

8. Comptroller General's Report, Mass Transit for Elderly and Handicapped Persons, 1977

9. Title 23, Code of Federal Regulations (C.F.R.), Part 450 and Title 49, C.F.R., Part 613

10. 23 C.F.R Section 450.120

11. 23 CFR, Section 450.116(b)

- encouragement of paratransit services and their integration into the public transportation system;
- provision of shelters and other amenities;
- better passenger information system;

Many of the "outreach" and "support" services being provided by local operators are applications of TSM-type projects. These refer to efforts by the transit operator to "reach out" to present and potential riders and usually include a component to familiarize passengers with how to make the best use of the transportation system. They are perhaps among the most cost-effective transit programs being currently implemented, in terms of their potential for increasing passenger ridership. (See Section III D on Outreach.)

B. 1976 Regulations

UMTA regulations on "Transportation for Elderly and Handicapped Persons" were published in the April 30, 1976 Federal Register. These consisted of additions to Title 49 of the C.F.R.¹² and a joint UMTA-FHWA addition to the Appendix of 23C.F.R.450.

1. Section 613.204 of Title 49 provided additional criteria for the UMT Administrator's approval for Section 3 and Section 5 assistance under the UMT Act. Approval may be granted "only if":
 - a. The transportation planning process exhibits satisfactory special efforts in planning facilities and services that can be utilized by elderly and handicapped persons;
 - b. After September 30, 1976, the annual element of the TIP contains projects designed to benefit elderly and handicapped persons, specifically including wheelchair users and those with semiambulatory capabilities; and

12. Section 609 and Section 613.204, plus Advisory Appendix

- c. After September 30, 1977, reasonable progress has been demonstrated in implementing previously programmed projects. (Emphasis added.)

The Advisory information for this section discussed the types of "projects" in the TIP that UMTA accepts as "deriving from local special efforts."¹³

UMTA declined to specifically define the terms "special efforts in planning," and the resultant "reasonable progress in implementing" such programs for handicapped persons. However, the agency did describe some "examples... that will be deemed to satisfy the requirement," such as:

- A program for wheelchair users and semiambulatory persons involving average annual expenditures of at least five percent of the urbanized area's apportionment under Section 5 of the UMT Act;
- Purchase of only wheelchair-accessible new fixed-route equipment until one half of the fleet is accessible, or provision of a substitute service that provides comparable coverage and service;
- Any type of system that assures every wheelchair user or semiambulatory person of transportation for 10 round-trips per week within the area at fares comparable to those charged for the standard service for trips of similar length.

These "suggestions," according to UMTA, were "meant to guide the development of local public transportation opportunities for wheelchair users and semi-ambulatory persons that in fact meet a significant fraction of the identified need within a reasonable time."

2. The Advisory information in the joint UMTA-FHA issuance for 23 C.F.R. Section 450 provides additional "guidance" for the planning and programs process. The material notes that since ambulatory elderly and handicapped

¹³Projects, for this purpose, may include "specially designed services and improvements in the coordination of existing resources," as well as current operating costs of wheelchair-accessible equipment.

persons constitute a sizeable percentage of transit riders, that any general improvements to transit service "can thus be expected to improve conditions for these groups."

However, persons in wheelchairs or who otherwise have difficulty using steps will be viewed as the focus of UMTA guidance in facilitating transit accessibility. With regard to these persons, the definition is presented that "special efforts in planning means genuine, good-faith progress in planning service for wheelchair users and semi-ambulatory persons that is reasonable by comparison with the service provided to the general public and that meets a significant fraction of the actual transportation needs of such persons within a reasonable time period. (Emphasis added.)

The joint Advisory Appendix also calls for particular attention to the needs of the working handicapped and those for whom the lack of accessible transportation precludes employment or job training. "Self-identification techniques" (asking the handicapped to identify themselves and their transportation needs to the operator) are stressed as primary sources of planning input.

To further increase input from citizen participation, the Advisory now states a presumption that it will be considered "unlikely that effective project development to meet the needs of these users can occur without the assistance and cooperation of such persons."

3. The final series of 1976 regulations was Title 49, Part 609. The purpose of this section was to "establish formally the requirements of UMTA on transportation for elderly and handicapped persons."¹⁴ The statutory definition for such persons was broadened to include all those who by

14. 49 C.F.R. Section 609.1

age as well as disability "are unable--without special facilities or special planning or design to utilize mass transportation facilities and services as effectively as persons who are not so affected."¹⁵

The preamble noted that substantial disagreement still exists as to the best type of service for wheelchair users. UMTA reaffirmed its reliance on the local planning process to determine whether accessible fixed-routes, separate specialized services, or some combination would best serve the needs of each community.

UMTA further observed there that "it is likely that site-specific tailoring and planning of appropriate services will always be necessary. We say this with full appreciation of the psychological and rehabilitation advantages of integrating wheelchair users into regular as opposed to specialized transit service."

These regulations provided the foundation on which transit operators in the MTC region and throughout the nation began broad-based special efforts to plan and implement transportation services to meet the travel needs of local E&H populations. These regulations remained in effect until just recently, when the Title 49 provisions were in general superseded by USDOT's "504" regulations. The Appendix materials in Title 23 are expected to be revised at a later date.

C. The "504" Regulations

The Rehabilitation Act of 1973 was intended primarily to encourage employment and job-training for handicapped persons.¹⁶ However, the now-famous Section 504 of the Act prohibits discrimination against handicapped persons in any federally-funded program:

"No otherwise qualified handicapped individual...shall, solely by reason of his handicap, be excluded from the participation in, be

¹⁵. 49 C.F.R. Section 609.3.

¹⁶. Public Law 93-112, 29 U.S. (Labor) Code, Section 701 et seq.

denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."
(Emphasis added.)

Acting on this directive, President Gerald Ford issued Executive Order 11914 on April 28, 1976. This order called for the Department of Health, Education, and Welfare (HEW) to prepare standards for the implementation of Section 504 and to coordinate compliance regulations for all other executive departments.

The Department of Transportation's proposed regulations (Notice of Proposed Rulemaking) were published in the June 8, 1978, Federal Register. Public hearings were held in five major cities, where comments were received from over 600 passengers, transit operators, and handicapped representatives.

The finalized version of the regulation was transmitted to HEW for approval in early April, 1979, and became effective on July 2, 1979¹⁷ (referred to herein as "the 504 Regulations.")

Subpart E of the 504 Regulations relates specifically to "Program Accessibility Requirements" for UMTA-funded programs. Under these rules, each transit system "when viewed in its entirety," must be accessible to all handicapped people, including those in wheelchairs. This means, for example, that each of San Francisco Muni's "modes" of transit (diesel buses, trolley buses, streetcars, cable cars) must eventually meet the accessibility requirements. Among others, these include:

1. All new buses purchased with UMTA funding must be lift-equipped;
2. Any fixed-route bus system which does not have half of its peak-hour fleet equipped by July, 1982, must provide an "accessible interim service." (This 50% requirement for "program accessibility" does not apply, however, to trolley buses, which are considered "a relatively rare kind of vehicle" and thus subject to the UMTA administrator's discretion for the timing of accessibility.) Interim service must be

17. These regulations have been added to Title 49 of the C.F.R. as Part 27.

funded at a cost equivalent to 2% of the operator's UMTA Section 5 allocation.

3. Light rail (Muni Metro) vehicles ordered after January 1, 1983, must be accessible to those who cannot climb steps. "Key stations" such as end-stations, major transfer points, and "special trip generators" must be accessible, but street stops need not be. Program accessibility must be achieved by 1999 (20 years).
4. Operators must identify their "programs and policies" which affect accessibility in a "Compliance Evaluation" to be submitted to UMTA by January, 1980. Modifications must be completed within 3 years of the regulations' effective date. MTC must prepare and submit a "Transition Plan" for "the entire period required to achieve program accessibility;" this is due July, 1980. Annual status reports on compliance will also be required.
5. Community participation is required in developing Compliance Evaluations and the Transition Plan. A public hearing must be held for the Transition Plan.

These and other aspects of the new regulations will be discussed throughout the remainder of this document.

D. California State Law

Although the main focus of this document will be on federal laws and regulation, it is important to note that the State of California has played a significant role in the development of public transportation services for both general passengers and for the E&H in particular.

The Mills-Alquist-Deddeh Act of 1971 (also known as the Transportation Development Act or TDA)¹⁸ established a mechanism of priorities and allocations for public transportation within the state. A significant percentage of the local operators' annual budgets comes from this source.

18. Public Utilities Code Section 99200 et seq., as amended

Since 1977 a section of the TDA known as Article 4.5¹⁹ has provided funding for "Community Transit Services" for persons "such as the disabled, who cannot use conventional transit services." Under this provision, up to 5% of an urbanized county's TDA monies may be allocated for such local services. MTC's recently adopted Resolution No. 679²⁰ provides a regional set of policies and criteria for Article 4.5 programs for E&H persons as well as other transit dependents. Similar services are funded in rural areas of the Bay Region and the state through Article 8 of TDA.

As early as 1968, the State Legislature had moved to guarantee the civil rights of "blind, visually handicapped, deaf, and other physically disabled persons" by guaranteeing "full and equal access, as other members of the general public, to...(any) public conveyances or modes of transportation."²¹ This state policy was reinforced through a 1977 agreement between the Departments of Transportation and Rehabilitation "to foster improved mobility" for the E&H "through improved accessibility to public transportation systems and to supplemental specialized transportation services."²²

In addition, State Government Code Section 4500 contains accessibility requirements for rapid transit equipment and urban transit systems.

E. MTC Regional Policies

The Metropolitan Transportation Commission (MTC) is responsible for providing "comprehensive regional transportation planning" for the San Francisco Bay Area. The region includes the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.

The MTC was created by AB 363 passed by the California Legislature and approved by Governor Reagan on September 14, 1970. The legislation mandated the MTC to prepare, adopt, and maintain a Regional Transportation Plan (RTP) for the

19. Public Utilities Code Sections 92275 through 99279.5

20. Adopted June 27, 1979

21. Civil Code Section 54.1(a)

22. Signed June 16, 1977

area. The plan was to provide a transportation system of highway, bridge and transit elements for the region; an estimate of the regional transportation needs for the next ten years; a schedule of priorities for the construction, modification and maintenance of each element to meet such needs; and lastly, a financial plan for the system.

The RTP was adopted by the Commission on June 23, 1973 (Resolution No. 85). It was specifically stated that the Commission and staff would continue to seek public input and carefully review the plan in its entirety "in light of comprehensive evaluations of its environmental, social and economic impact."

MTC's general goals are stated in the RTP in the Declaration of Intent. The "Objectives and Policies" of the Plan describe the conditions which will be deemed to achieve those goals, and the actions necessary to attain that accomplishment. Commission resolutions then provide the ongoing basis for implementation of programs to reach the goals.

Over the years RTP Policy 4.5²³ has provided the cornerstone of the Commission's emphasis on improved transportation for all low mobility groups. In the original 1973 version of the RTP, this policy was stated simply as:

"Transportation programs shall be designed to help solve the transit problems of the handicapped, children, aged and other nondrivers."

The development of Policy 4.5 has been closely tied to the Commission's actions in directing the growth of regional E&H planning, as well as reflecting related stated and federal government directives. Specific requirements of Policy 4.5 as articulated in the 1978 RTP are derived from MTC Resolutions No. 299 (January, 1976), No. 316 (June, 1976), No. 467 (September, 1977) and No. 468 (August, 1977). These resolutions followed closely the evolution of UMTA regulations over this time period. Primary reliance has been placed

23. No relation to TDA Article 4.5

on the region's operators to fulfill the UMTA emphasis on local efforts as solutions to E&H needs. It is felt that this approach allows for greater creativity and flexibility in responding to particularized transit needs than would a rigidly consistent area-wide program.

One graphic illustration of the interplay between the Bay Area (local/regional) planning process and the federal regulations lies in the area of Citizen Participation (see Section III E for further discussion). One of the earliest official considerations of the topic was in the September, 1975 TIP regulations which required that the urban planning process shall "include provisions to ensure involvement of the public."²⁴ Even before this, however, local operators had, both formally and informally, utilized the advice of elderly and handicapped passengers and other citizens.

The April, 1976, joint UMTA/FHWA regulations on Transportation for Elderly and Handicapped Persons added an "Advisory Appendix" stating a federal agency presumption that effective planning for E&H passengers, particularly wheelchair and semiambulatory persons, is "unlikely" without their active "assistance and cooperation." It was in this developing framework of local efforts and federal impetus for consumer input that MTC Resolution No. 316 was enacted in June, 1976. Under its terms, each Commissioner appoints one senior and one handicapped advisor "concerning issues related to transportation needs and services." Since its inception, this program has provided invaluable input into the planning process for the Commission, its staff, and the local operators.

A related area of involvement by the Commission lies with the coordination of paratransit and secondary transportation services. The TSM regulations required the "consideration of such actions to improve transit service." A proposed "Statement of Policy" on Paratransit Services was published by

24. C.F.R. Section 450.120(a)(3)

UMTA in October, 1976, but was never finalized. New regulations are expected shortly from UMTA. MTC Resolution No. 468 has gone even further by fostering the establishment of a Paratransit Coordinating Council (PCC) within each county, with participation by private agencies and operators, public mass transportation operators, consumer representatives, cities, and the county government. In addition, participation in such a PCC is a prerequisite to MTC's approval of state and federal funding for such paratransit operators.

MTC Policy 4.5 (see next page) summarizes the Commission's actions and resolutions pertaining to the improvement of the E&H planning and services. Related resolutions are noted in Appendix 1.

"Transportation programs designed to solve the transit problems of minorities, elderly, young, handicapped, economically disadvantaged and other nondrivers shall be an integral part of regional transportation planning. Transportation programs designed to solve transit problems experienced by elderly and handicapped persons are an integral part of the Commission's responsibility. This responsibility includes:

- increasing the involvement of elderly and handicapped persons in Commission policy development;
- encouraging improved transportation services for elderly and handicapped persons; and
- encouraging improvements to transportation vehicles and facilities so they are reasonably accessible to handicapped persons.

In support of its concerns for the elderly and handicapped, it is the Commission's policy that:

- One elderly and one handicapped person be selected by each Commissioner to advise the Commissioner on transportation matters pertaining to elderly and handicapped persons.
- Operators of public transportation systems are responsible for developing and implementing changes to their facilities which make the facilities reasonably accessible to handicapped persons. These operators should cooperate and coordinate with MTC, appropriate private and nonprofit agencies, and paratransit operators as necessary for this purpose.
- Each county shall be requested to participate in a county-wide paratransit coordinating council, composed of private and nonprofit agencies and paratransit operators with the participation of MTC and other concerned agencies. This council should respond to the needs of the young, the elderly, low income and handicapped persons, and should seek increased coordination and availability of special transportation services by promoting the efficient use of limited paratransit resources.
- Funding for private, nonprofit or paratransit operators, including claimants under UMTA Section 16(b)(2), should be withheld unless the claimant demonstrates a willingness to participate in a county-wide paratransit coordinating council.
- Each transit operator that operates 200 or more buses shall operate, as soon as possible, at least twenty-five wheelchair-accessible standard size buses on fixed and specialized regular service routes.
- Funding for buses used in public mass transportation operations on fixed-routes and specialized and supplemental route systems should only be provided for buses that are wheelchair-accessible.
- All buses on conventional fixed-route systems should, by January 1, 1987, be fully accessible at the level of service common during the day and provide (together with specialized and supplemental transit services) the handicapped passenger with service equivalent to that provided other passengers.
- In addition to the aforementioned provisions for financing transit operations, all programs involving requirements and applications for financing of transit or paratransit services in the Bay Area shall be developed and processed within the framework of MTC's statutory responsibilities for transportation planning, programming, and implementing transit improvements."

III. ANALYSIS

A. Demographics

1. Population

In order to determine the effectiveness of transit services for elderly and handicapped persons, it is important to remember that not all such people are "unable to use public transportation effectively." The concept of transportation-handicapped (TH), which more nearly matches the spirit of federal law and regulation, refers to those individuals who, for whatever reason, experience some degree of functional difficulty or mobility impairment in attempting to use conventional fixed-route, fixed-schedule mass transit. In describing someone as TH, the particular medical diagnosis is relatively unimportant; we look, rather, to the behavior or activity that is restricted. Ten specific transit-related problem functions have been delineated in this regard:

1. Get on or off a public transit bus or train
2. Go or walk 3 blocks
3. Wait, standing, for more than 10 minutes
4. Keep balance while standing in a moving vehicle
5. Move in crowds
6. Read information signs and transit schedules (not including foreign language problems)
7. Grasp coins, tickets, or handles
8. Request transit information
9. Hear transit information
10. Understand and follow transit directions (not including foreign language problems).²⁵

It is obvious from the above listing that the TH population includes

²⁵ Abt Associates, Inc., Transportation Needs of the Handicapped: Travel Barriers, as modified by Crain and Associates for AC Transit Study

far more people than those confined to wheelchairs. It is also important to note that some of these activities (e.g., keeping one's balance, reading transit schedules) may present problems for even the most able-bodied passenger.

The 1976 UMTA regulations on "Transportation for the Elderly and Handicapped" suggested that transit operators identify the location of TH people as a prelude to assessing their level of transportation need. "Self-identification techniques" were recommended; whereby the handicapped "identify themselves and report their transportation needs to the planning body."; these have since been used by several major operators to obtain a more accurate portrait of their local E&H communities. San Mateo County Transit District's (SamTrans) registration process for its Redi-wheels program, for example, has provided a significant bank of knowledge about mobility-impaired persons in that county. The AC Transit Study²⁶ included an extensively distributed self-identification survey, for which over 1600 returns were obtained. Other operators have worked through citizens' groups and organizations of seniors and handicapped to compile similar information.

On a regional scale, however, such an individualized profile is less feasible. Census data makes it relatively easy to approximate the location and makeup of the "elderly" population, although the lower age-limit assigned to this group may vary widely, and the information from the 1970 census is now rather outdated. Information on "the handicapped" is not as readily available from this source since the census question on the topic was phrased in terms of being "disabled from work." However, a question specifically assessing respondents' inability to use public transportation will be included in the 1980 census.

²⁶ Crain and Associates, AC Transit Elderly and Handicapped Planning Study-Analysis of Needs and Alternatives: Final Report. (1977)

Nevertheless, since such a great correlation exists between age and disability (one recent Caltrans report indicates that statewide, nearly two-thirds of all handicapped persons are over 60 years old and that over one-fourth of the elderly are handicapped²⁴), an estimate of the number of functionally transportation-handicapped (TH) individuals within an area can be determined. Additionally, since such a high percentage of both elderly and handicapped persons live on fixed incomes, a low-income correlation exists between the two groups.

For the 1977 AC Transit Elderly and Handicapped Planning Study, funded in part by MTC, Crain and Associates devised an equation to estimate the TH population for each census tract within the District's service area. This formula has been applied for the MTC's Regional Planning Zones in an effort to measure the probable concentrations of TH populations for each county.

The Crain formula is determined as:

$$\% \text{ TH} = 1.88 + .19 (\% \text{ elderly}) + .16 (\% \text{ poverty})$$

where: %TH = percentage of population in zone which is transportation handicapped ;

% elderly = percentage of population in zone which is 60 years or older²⁸; and

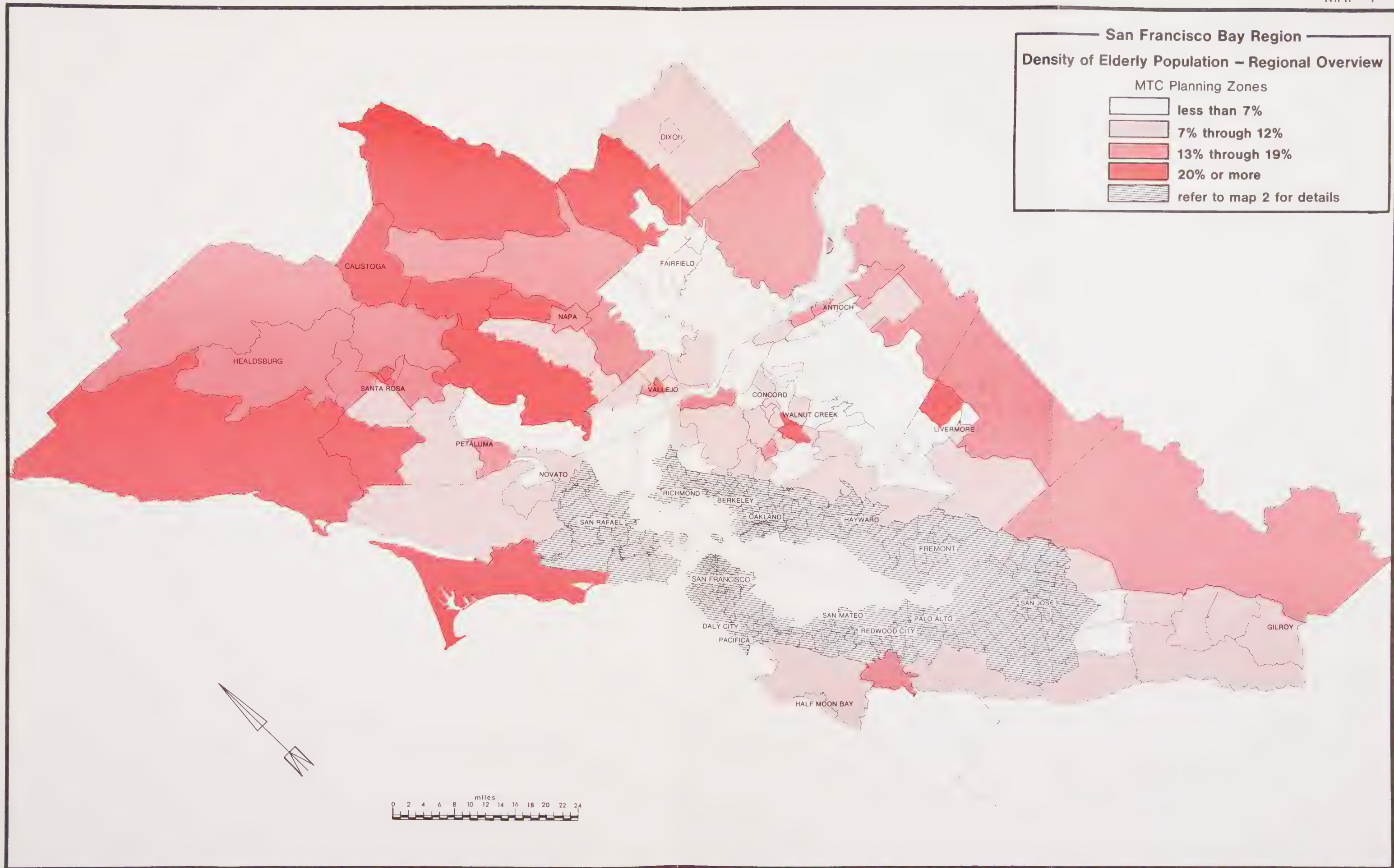
% poverty = percentage of households in zone which have incomes below poverty level.

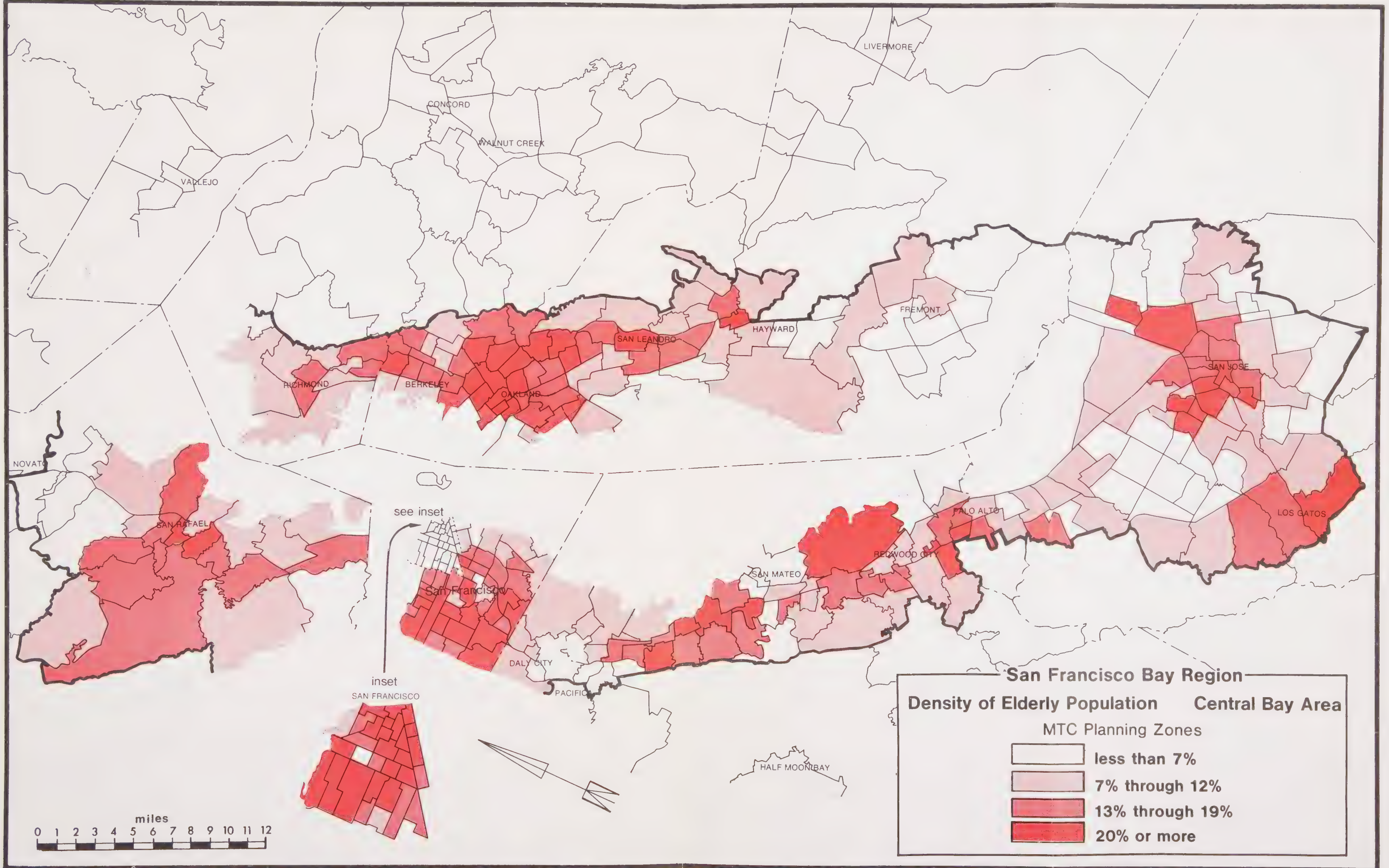
Maps 1 through 4 show the estimated population density of elderly and TH persons, respectively, within the nine-county Bay Region, based on applying the Crain formula to 1970 census data.

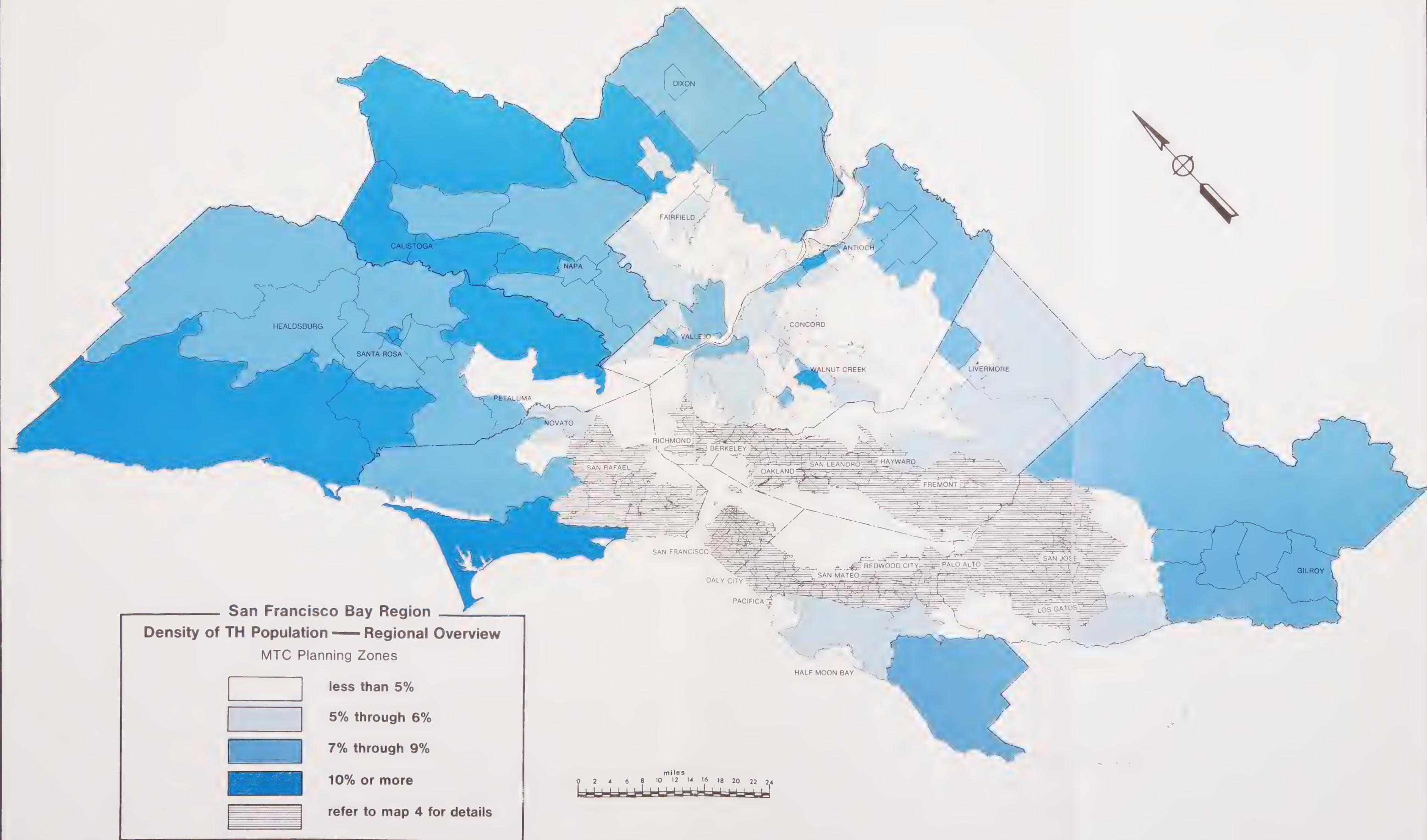
²⁷ Caltrans, Guidelines for the Identification of the Transportation Elderly and Handicapped. (1978)

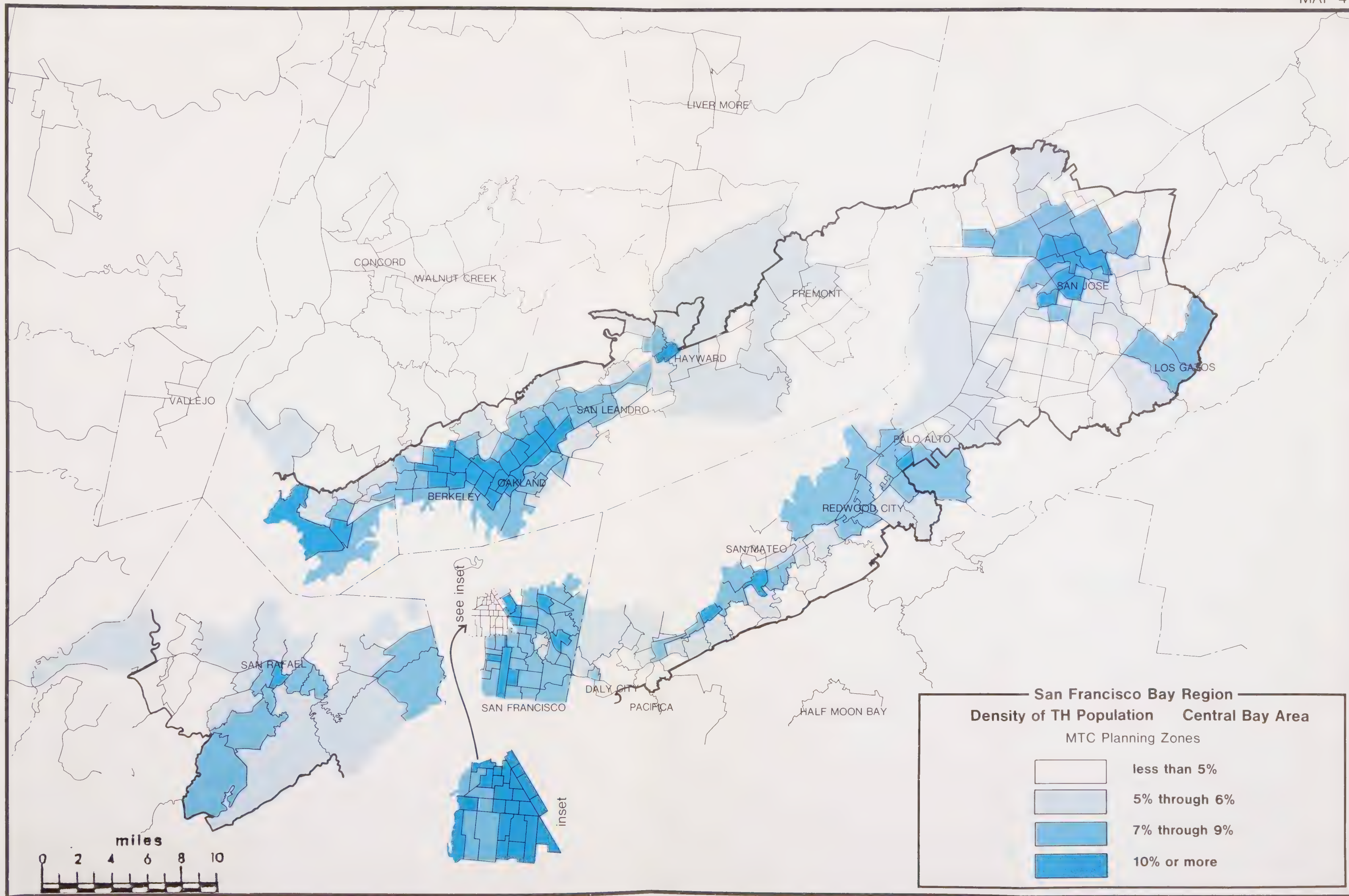
²⁸ Note: The original Crain report used 65 as the lower limit on "seniority." Sixty was used here for consistency with other MTC planning projects. The slight resultant increase in the TH percentage is not considered significant.

As of 1970, there were some 591,592 elderly (age 60 or older) persons (12.8% of the total population) and an estimated 339,001 TH (7.3% of total) in the Bay Region. However, several factors combine to make these numbers inexact for current planning process. First, the general trend is toward an "older" population - more people are living longer than in previous generations. Secondly, the MTC region has experienced rapid growth in total population during the past decade, which implies not only more people overall, but more elderly and TH persons as well. It should also be noted that certain area of the region (e.g. Berkeley, Walnut Creek) have exceptionally high percentages of TH or elderly population, due to the location of specialized facilities nearby.









2. Methodology of Estimation Update

In order to determine a more current picture of the regional population, basic data was obtained from the 1970 census figures, and from the state-supplied statistics²⁹ for each county from the 1975 special census. An assumption was made that the average rate of population change from 1975 to the present was consistent with the growth rate for previous five years, for each county.

Population figures were then extrapolated from the 1970 base to give the following estimations for 1979:

TABLE 1

Estimated 1979 County Populations
For the Bay Region

<u>County</u>	<u>Total Population</u>	<u>Population Over 60</u>		<u>TH Population</u>	
Alameda	1,102,553	167,919	(15.2%)	91,402	(8.3%)
Contra Costa	610,249	77,746	(12.7%)	40,398	(6.6%)
Marin	224,870	28,469	(12.7%)	14,549	(6.5%)
Napa	95,448	18,517	(19.4%)	8,819	(9.2%)
San Francisco	635,462	137,832	(21.7%)	65,516	(10.3%)
San Mateo	588,033	84,618	(14.4%)	38,987	(6.6%)
Santa Clara	1,296,349	131,579	(10.2%)	79,337	(6.1%)
Solano	192,562	24,244	(12.6%)	14,538	(7.6%)
Sonoma	275,832	50,505	(18.3%)	27,059	(9.8%)
Regional Total	5,021,358	721,429	(14.4% of total.)	380,605	(7.6% of total)

Of course, there is a certain degree of overlap, since some people are counted as both elderly and TH. However, it should be noted that while the regional population increased at an average rate of about 1% per year, the relative increase for older persons approached triple that rate; the TH population increased 45% faster than the general total. Only San Francisco, among the counties, experienced a declining population over this time.

²⁹. Caltrans, ibid. (Data derived from Department of Finance)

3. Geography and Urbanization

The Bay Area encompasses a variety of terrain and population patterns as it spreads from the shore of the common waterway. A ring of densely settled towns and cities marks the generally low-lying coastal fringe of the Bay. Here are located the area's three major metropolises: San Francisco, Oakland, and San Jose. Spreading farther outward, the coastal hills provide a natural barrier to urbanization and a more rural local character is seen, especially in the northern counties of Napa and Sonoma and in southern Santa Clara County.

Major transportation corridors and traffic patterns in the MTC Region parallel the developed state and federal highway system. These include Highways 17 and 24 and Interstates 580 and 680 in the East Bay, Interstate 80 northeasterly and the U.S. 101 Corridor in the north bay, with Interstate 280 and U.S. 101 running through the Peninsula through to the south. Additionally, transbay travel via 7 bridges, the ferries and the BART tube provides a vital link.

An effective regional transit system requires accessible travel along all these major trunk lines with additional feeder service to and throughout lesser routes and outlying areas. Although the people of the MTC Region often refer to themselves as residents of "the Bay Area," it is obvious that no single transportation mode or facility is suitable for all. The automobile remains the predominant method for both local and intercommunity travel. Additionally, county-wide and multi-county public transit districts are a relatively new development

in the area's growth, and with the profusion of public and paratransit operators, there has historically been a lack of inter-system coordination. This creates further impediments to the widespread use of transit. For both elderly and handicapped persons, these factors combine to require a regional public transportation network that can more easily and effectively meet their travel needs.

B. Vehicle Accessibility

1. Introduction

Wheelchairs users and persons who are unable to climb stairs are among the most visible of the transit-dependent populace and are those for whom accessibility can only be served by major physical changes to existing transit equipment. Whether the vehicle is a large fixed route bus, a demand-responsive minibus or van, or a rapid rail or commuter train, the problem remains to provide a safe and reliable level-change mechanism that can provide entry or exit for these passengers. Further compounding the difficulty for operators and bus manufacturers have been variations in the federal regulations as to whether this level-change device should be provided by a ramp and/or a lift, and of what design.

UMTA sponsored extensive research during the 1970's to develop Transbus, "the bus of the future." This provided a ramped doorway for all passengers. However, commercial technology for bus access developed more in the area of passenger lifts. Prior to the enactment of the 504 Regulations, UMTA required either a ramp or lift, but at the front door of the vehicle. At the same time, one of the major manufacturers of "Advanced Design Buses" (ADB's) specified its design with a lift at the rear door due to concerns over structural and operational safety.

The utilization and deployment of such accessible vehicles must also consider the fact that geographical and/or physical constraints may preclude some E&H persons from using the system simply because they cannot get to a bus stop. Therefore, local solutions for local situations have long been favored in determining the most effective use of limited funding resources.

In mandating the Transbus performance specifications in 1977,

DOT Secretary Adams specifically noted:

"It is appropriate to allow local governments to decide how best to serve their elderly and handicapped populations until Transbus is ready for production. Those who purchase lift-equipped buses will thereby offer substantially enhanced accessibility to their elderly and handicapped citizens. Those offering special services will provide valuable experience for the period after Transbus is introduced since even fully accessible fixed route buses will not meet the transportation needs of all elderly and handicapped."

This emphasis on local autonomy has been a cornerstone of MTC's programming efforts in the E&H area. It is strongly felt that this approach allows greater creativity to operators to explore the numerous possibilities to provide appropriate service throughout the region. The travel needs and patterns in the rural counties are considerably different from those in downtown Oakland, for example, and an effective transit system must be designed to accomodate each.

Recognizing the considerable problems, MTC has nevertheless determined that the goal of full accessibility to public transportation, as expressed by both local citizens and the federal guidelines, required regional emphasis as well.

Accordingly, the Commission in September, 1977, adopted Resolution No. 467, which includes the following points:

- a. After October, 1977, MTC would approve proposed grants for small-sized buses only if they were wheelchair-accessible;
- b. A similar requirement would be applied to full-size transit buses after October, 1978;
- c. All major transit operators would be encouraged to have at least 25 accessible buses in operation "as soon as practical;" and
- d. All vehicles "at the level of service common during the day" should be accessible by January, 1987.

With these considerations in mind, MTC's planning and programming efforts have been geared toward the effective use of existing accessible resources, with an expansion of such services in an orderly manner to fit both local and regional needs. The Bay Area is somewhat unique in that it possesses a rapid rail system, constructed as the first such wheelchair-accessible operation in the United States, and which provides major trunkline service throughout three counties and into a fourth county. Lift-equipped fixed-route and demand-responsive bus systems in some of these areas³⁰ provide feeder service to the BART system as well as primary transit for local communities. However, the lack of accessible public feeder service remains a barrier to making BART truly accessible.

2. BART

a. Description

The Bay Area Rapid Transit District encompasses 71 miles of track in the counties of Alameda, Contra Costa, and San Francisco, with a western terminus at Daly City in San Mateo County. There are 34 stations, providing direct access to 15 municipalities. Entry and exit from BART vehicles is at platform level, with elevator and escalator service provided to subway or above ground stations.

b. Analysis

The effectiveness of BART's accessibility is, of course, occasionally flawed. Passengers' complaints most often concern mechanical failures, lack of security, and inconvenient location of the elevator system, as well as problems encountered at "remotely staffed" stations.³¹

Nevertheless, BART provides the basis for an integrated regional

³⁰ See Map 5 and Appendix 3 for an Inventory of Accessible Public Transportation services in the Region.

³¹ The remotely staffed stations (RSS) program was discontinued in April 1979.

transportation network and in general provides a trip that is faster, safer, and more comfortable for the passenger than a bus ride.

However, if BART is to fulfill its potential as an accessible trunkline service, it is necessary for the wheelchair or semi-ambulatory passenger to get to and from station as well. Indications are that most handicapped people who use BART do so by of private transportation. Wheelchair-accessible public transit service to BART stations is currently provided by the El BARTito and Air BART shuttles, SamTrans' Redi-Wheels and Mainline service, the Walnut Creek and Concord city-run systems, and special paratransit in San Francisco and Berkeley, as well as the accessible "subsidized taxi" services in Hayward, El Cerrito, and Oakland. Every operator reports "very few" wheelchair passengers to or from BART. A considerable problem for the handicapped person may be that only one end of his trip provides an accessible service. In addition, there is little information publicized about those services which are available, so that a trip may be foregone because of lack of awareness of existing accessibility. Most operators report that any trips to BART stations generally involve passengers who use the system on a regular basis. Common trip purposes include medical, school, and sports events (Coliseum station).

c. Conclusions

Despite its "internal" accessibility, BART's effectiveness for mobility-impaired persons is seriously hampered by a lack of well-developed accessible feeder service via public transit. Santa Clara County is proposing to implement lift-bus service on its fixed route system to the Fremont station by the end of 1979. AC Transit's proposed deployment plan for 1980-81 will include nearly all of the

San Francisco Bay Region Current & Proposed Accessible Public Transportation



BART stations within its regular service area. In the meantime, and for outside areas, however, private and paratransit resources will be required to augment and supplement BART.

3. Fixed Route Services

a. Description and Technology

Fixed route transit is the traditional service provided by public transportation--large buses traveling specified streets on a generally-regular schedule. Until the last few years, standard bus design required steps to enter or exit the bus, often with risers of 10 to 12 inches or more. The advanced design buses (ADB's) which have become available through the UMTA-funded Transbus research now feature lower-spaced steps for passengers and a "kneeling" capability that allows the first step to be hydraulically lowered closer to the ground or curb level. However, a wheelchair still cannot climb steps.

Although UMTA had favored a ramp as a means of wheelchair access to transit buses,³² most of the developmental technology has been devoted to lifts, either "active" or "passive." The original lifts were active, where the platform structure forms a distinct entry mode into the vehicle and usually requires a large, unwieldy added structure. The operational and service requirements of fixed route buses are such that these lifts simply do not stand up to normal wear. It is this factor that has been instrumental in many operators' reluctance to provide accessibility features.

A passive lift, on the other hand, is one where the lift structure serves as the regular entry/exit mode for ambulatory passengers as well.

³². USDOT Secretary Brock Adams' Transbus Mandate, May 1977.

The usual construction is for the steps of the bus to "slide out" to form a lift platform. This type of lift is more frequently being incorporated into the original equipment design of the larger fixed-route buses, although major operational problems remain with this device also.

In order to further the reliability of state-of-the-art development, both Muni and AC Transit are participating in the Caltrans-sponsored Passive Lift Demonstration. AC is testing the Vapor-lift, while Muni, in cooperation with the United Cerebral Palsy Association of San Francisco, is working with a model from Williams Machine. The two transit properties will be testing the lifts under a variety of routes and operating conditions, with preliminary evaluations due later this year.

Although wheelchair users represent less than 1% of the total urban population according to DOT statistics,³³ the incremental cost increases traceable to lift accessibility on buses has been estimated at 6-10% for capital procurement and variously between 2% and 20% for maintenance and operations³⁴ (based on FY 1977-78 costs).

Santa Clara County had even attempted to rectify the situation by developing and patenting its own "Transit Elevator" (TE-1) lift during 1976-77. However, a commercial manufacturer for the device could not be found. The "state of the art" has been so unsuccessful that a 1978 study conducted for UMTA concluded that current lift

³³ Grey Marketing and Research Department, National Survey Report on a Market Definition/Need Satisfaction Study for Transportation Handicapped People (1978)

³⁴ UMTA The Economic Impacts of U.S.D.O.T. Regulations Implementing Section 504 (1978)

equipment was costly, unreliable, and unsuitable for line-haul service; and that retrofitting results were probably even worse. 35

b. Analysis

The development of passive lifts had been hoped to be a major breakthrough in improving the reliability and performance of these devices. The most common model currently available is the T.D.T. (Transportation Design Technology of San Diego), which has been procured on AM General Buses for San Mateo and Gilligs for Santa Clara. Neither operator is satisfied with the performance of this lift. Problems have included engineering and design defects and an increased accident rate due to lift parts that hang or "drift" down from the bus body. Additionally, if the lift fails in an open position, the entire bus must be taken out of service, with an adverse effect in overall on-time performance. No data is yet available on the increased costs to the Districts since much of the "re-rigging" of the lifts has occurred during the warranty period.

An additional problem encountered here also is the infrequent use of the lifts. SamTrans' accessible routes register only approximately 50 person-trips per month where the lift is activated. (This includes use for semiambulatory passengers with walkers - or even mothers with baby strollers! - as well as wheelchairs.) A corollary to this infrequent use is that the drivers lose familiarity with the sometimes-complex operational procedures for the device, which then leads to further schedule delays as well as occasional mishaps.

c. Conclusions

The question of whether additional accessible buses will be acquired

35 Booz Allen & Hamilton, Preliminary Assessment of the Feasibility of Mandating Lifts for New Buses Procured Prior to Transbus (1978).

has been mooted by federal regulations. In the Bay Region, MTC policy has determined that after October 1978, funding approval would only be granted for buses which allow wheelchair access. Additional research and development remains critical, however, to improve current lift performance. Two passive lift models that have been mentioned by operators as "seeming promising" are the Transi-Lift being used in the Seattle Metro system and the Vapor-Lift.

Other improvements indicated by the experiences in San Mateo and Santa Clara Counties include better publicity of the availability of such services and improved driver training.

It should be noted, however, that some of the problems indicated seem correlated to "big buses." Smaller fixed route operators, such as Walnut Creek and Santa Rosa, do not report such extensive mechanical problems with their lifts. However, lack of use of the lifts is discouraging here also.

A fixed-route bus system provides the advantage to passengers of a predictable schedule with a high percentage of on-time performance. The extent to which this reliability can be maintained as lift usage becomes more frequent is still unknown. "Personalized" service to passengers is traditionally low. For the operator, there is a large capital investment required, with usually higher labor costs than community-based services. However, such services are efficient and appropriate over trunkline distances or on high-volume patronage routes.

4. Demand Responsive Services

a. Description and Technology

Demand responsive transportation (DRT) is a form of travel where service is provided on an "as needed" basis. Generally the

passenger telephones a central dispatch office, requests service and at some later time is provided transportation, often on a door-to-door basis (similar to taxis). Advance notice requirements by the operator may vary from 10 minutes to 2 days or even more, depending on locale, number of vehicles and level of requests for service. Vehicles are often vans or small buses. This type of service is especially appropriate as a primary transit system in a small town and/or as a feeder service to transfer points on a longer fixed route. When vehicles equipped with passenger lifts are used, it provides a high level of increased mobility to elderly and handicapped persons.

These smaller vehicles generally use an active lift, mounted on either the side or rear of the vehicle. While these lifts, too, experienced severe reliability problems in earlier years, the current generation is vastly improved. In the summer of 1978, the Collins Lift introduced a model which includes a handrail that folds out when the lift is deployed. Drivers and semiambulatory passengers are especially pleased with the "added security" that this feature affords. Electrical and hydraulic problems of the newer lifts of this generation are also significantly decreased.

b. Analysis

This type of demand responsive service has been implemented under a wide variety of arrangements, including self-operation (e.g., Santa Clara South County, Walnut Creek) or under contract with private corporations (e.g., Redi-Wheels, Fairfield), non-profit organizations (e.g., Muni/Canon Kip, Solano County EOC), and even public operators (e.g., Concord/AC Transit).

Service areas range from only a few square miles (Fairfield, Concord)

to over a hundred (Tri-Delta, Napa County).

The door-to-door aspect of DRT is favored by those persons who either cannot, or choose not to, use fixed-route services. There is generally a high level of personal interaction for the passenger since s/he must initiate the request for service. However, the unpredictability of wait time for service can be a serious drawback. In addition, if some one must wait several days for an available time slot, the service can hardly be said to be "effectively accessible," even if it is lift-equipped.

c. Conclusions

Among the main problems encountered with DRT services is the length and unpredictability of wait time for service. Traditionally, only a limited number of vehicles are available because of constraints inherent in a human/manual scheduling system. Spiraling gasoline costs are also contributing to current operating problems. Although capital investment and labor costs are low in comparison to a major transit operation, operating costs (per mile and per passenger) are relatively higher due to insurance costs and the more random nature of routing and patronage. However, this type of service can take the passengers precisely to and from any specified destination. As a feeder service, it can be used to decrease overall operating costs and to supply passengers to the longer trunklines, once these latter are accessible.

5. Problem Areas

a. Rail Service

Although BART is a generally accessible service, other rail facilities in the region are not equally usable by the handicapped. The Bay Area is served by AMTRAK at stations in Richmond, Oakland, and San Jose, and facilities at the latter two are not readily accessible to wheelchair patrons, although advance requests can sometimes be

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accommodated. The DOT 504 regulations include a heavy emphasis on this mode of travel, although a lead time of up to 20 years is allowed for the change process.

Southern Pacific operates a commuter rail service between San Jose and San Francisco. No federal funding is currently involved in the operation, but user-side subsidies are provided through state TDA allocations as ticket discounts to residents of San Francisco, San Mateo, and Santa Clara Counties. This system is not readily accessible to wheelchair or semi-ambulatory passengers.

The San Francisco Municipal Railway is programming a new light rail "Muni Metro" system to replace the existing streetcars and to connect directly with BART. A lengthy study was conducted to determine the best method of accessibility to this system - either platform steps or retrofitted lifts for the vehicles. No final decision has been made as to the most reasonable method of providing such access; however, the new 504 regulations will be applicable to the system.

San Francisco is also applying for federal funds to expand and renovate its famed cable-car system. It is not known at this time to what extent an accessibility feature will be incorporated.

b. Unincorporated Areas

The areas of the region that receive the lowest level of transit service overall, and thus relatively little accessible service, are those lying outside city limits. State funding is available in these areas only through a county's allocations, and federal money has until recently been geared solely toward "urban" rather than "rural" mass transportation. Newly available UMTA Section 18 money will help alleviate this disparity. Especially in the northern counties of Napa

and Sonoma where there are higher than average proportions of elderly and TH persons, this has meant a reliance on family, friends, and social agencies for any form of personal mobility. One of the aims of this plan is to work with these counties to identify areas of particular need and to investigate solutions that will provide such services in an effective and efficient manner.

C. Transit Needs and Services Provided

1. Purpose

As an initial level of analysis, this section will investigate the match between 1) the location and travel needs of senior and TH persons and, 2) existing wheelchair-accessible services provided by publicly-funded fixed-route and paratransit operators. The results of this comparison will be the basis for evaluating the deployment strategies contemplated within the region for new bus purchases (Chapter 4), and for recommending areas of concentration for future planning efforts by MTC and transit operators (Chapter 5).

Other current efforts toward improving transit services and facilities are discussed in Section D of this chapter.

2. Regional Overview

a. Current Ridership

In 1978, UMTA published the National Survey Report on a Market Definition/Needs Satisfaction Study for Transportation Handicapped People. According to this report, an average person in an area having fixed-route mass transit services makes some 55 one-way trips per month, of which 15% are via transit. In contrast, comparable figures for a TH person show 29½ trips, with 11% via transit. The TH population is 5.4% of the total population in these areas.

In the Bay Area, most of the areas having heavy concentrations of population provide some form of transit services. There are about 5 million people in the region, of whom an estimated 380,600 are TH, or 7.6% of the total population. Extrapolating the national figures to the regional TH population, transit ridership by Bay Area TH

persons should be at about 47,500 trips per weekday. Table 2 shows the operators' reports for average daily senior/handicapped reduced fare passenger count.

In some instances the transit usage by elderly or handicapped persons may actually be even greater than noted here, since some E&H persons will pay a full fare in order to avoid being characterized as "E" or "H." However, conservatively estimating that one-half of this reduced fare ridership is TH persons, the Bay Area enjoys nearly 10% above the national average.

b. Analysis

The better-than-average E&H ridership record for the Bay Area region appears to be based upon four factors. First, many people in the region, at both the agency level and among the general public, have worked hard to bring about the high level of transit services found throughout the region, many of these designed with the E&H population specifically in mind. Second, transit operators have taken major leadership roles in experimenting with innovative approaches to E&H mobility. Third, this region has invested a large amount of local, state, and federal funds for capital and operating purposes. Fourth, smaller operators, including many cities and counties throughout the region, have experimented with a variety of services to determine what best suits the local conditions and found that the demand-responsive type of services to be especially suited to both the diverse travel patterns and destinations of urban E&H residents, as well as the more spread-out dwelling places for E&H people in rural areas.

On the other hand, much opportunity still exists to further improve E&H mobility in the region. Maps 1 through 4 show that higher

TABLE 2

Daily Transit Ridership in Bay Region
(June, 1979)

<u>Operator</u>	<u>Total Daily Average</u>	<u>E&H Ridership (reduced fares)</u>
BART	170,000	15,300
AC	247,700	23,200
Walnut Creek	1,100	187
Concord	45	35
Tri Delta	60	60
WCCTA	50	45
Contra Costa 4.5 Programs	85	85
C.I.L.	100	100
Livermore	780	325
Alameda 4.5 Programs	470	470
Santa Clara Fixed-Route	75,000	9,000
South County Dial-A-Ride	410	60
Santa Clara 4.5 Programs	750	750
Southern Pacific Commute Service	15,000	500*
SamTrans Fixed-Route	60,000	7,800
Redi-Wheels	185	185
Muni	490,000	39,000
Canon Kip	200	200
Golden Gate	37,000	2,800
Whistlestop Wheels	390	390
Santa Rosa	1,630	635
Volunteer Wheels	50	50
Care-A-Van	80	80
Napa City	1,240	400
Napa County	40	30
Tri City	25	25
Vallejo	5,000	1,250
Vallejo Subsidized Taxi	150	150
Fairfield	400	100
Solano EOC	355	290
Totals	1,108,295	103,332 (9.3%)

*Estimated ridership - special E&H fares not available.

Note: Total Daily Average figures are based on operators' tallies during the height of the state-wide "gasoline crunch" and thus reflect heavy commuter transit usage. Prior to this time, E&H reduced fare ridership averaged approximately 15% of the Region's total transit usage.

concentrations of elderly and TH persons, relative to the total population, are located both in the rural areas and the central cities of the region. While a usable level of transit services oriented to the E&H already exists, many others are still in the beginning stages of implementation. Much needs to be done to increase the level of service and to improve the match between the travel patterns of E&H population and the services provided. In the rural areas, transit services need to be upgraded, especially during evenings and weekends. In the central bay area, fixed-route services in the East Bay, San Francisco and Marin County need priority attention. These services need to be designed and operated to provide:

- basic regional trunk services
- feeder service to trunk lines
- intracommunity routes linking major origins and destination of E&H travelers
- improvements in transfer arrangements for fares, schedules, and physical setting between fixed-route operators and between fixed-route and paratransit services.

3. Detailed Analysis of Wheelchair Accessible Services

a. East Bay

Three BART lines (Concord, Richmond, Fremont) serve the East Bay counties of Alameda and Contra Costa. BART is a fully-accessible system, yet its ridership, according to ticket-color usage, numbers only 4.8% elderly and 1.3% handicapped of the 170,000 daily ridership. Actual E&H usage is probably higher, however, with passengers using regular station-vended tickets since the discount tickets can only be purchased at selected banks.

The highest proportions of elderly persons in the East Bay Counties are in the cities of Berkeley and Oakland, at the Rossmoor Retirement community in Walnut Creek, and in the eastern mountains beyond Livermore. The latter area is rather sparsely settled, and Rossmoor maintains its own transportation system for residents, since its roads are private property.

The AC Transit bus system, while not yet wheelchair-accessible, is providing much service to the E&H community. The Crain Study³⁶ has shown that the overall transit usage for TH ridership in the AC service area is about 18%, as contrasted to less than 10% region-wide. The same study showed that 48% of the TH population in the service area use AC Transit "often or occasionally," while 43% of those TH persons over 65 years old use AC regularly. AC Transit has begun to implement TH information and outreach services, driver "sensitivity" training and priority seating for the E&H passengers. In addition to BART and AC Transit, wheelchair-accessible paratransit services are becoming increasingly funded and thus more available to passengers.

The degree of success in providing TH mobility as shown by the ridership reports of transit and paratransit operators leads to several implications. First, a regional trunk service such as BART needs well-coordinated and extensive feeder services designed to provide easy transfer arrangements for fares, schedules and physical facilities. AC Transit is in the preparatory stages of retrofitting wheelchair-accessible buses to serve its BART Express routes; these improved transfer arrangements between BART and AC are likely to increase E&H ridership for both systems. Second, E&H travelers tend to make short, local trips rather than inter-community trips. Destinations for E&H travelers are predominantly medical and social service facilities,

36. Crain and Associates, AC Transit Elderly and Handicapped Planning Study (1977)

TABLE 3

Changes to Transit Service Desired by TH Persons

<u>Change Desired</u>	% of TH Population Finding this Change:		
	<u>"Necessary"</u>	<u>"Helpful"</u>	<u>(Total)</u>
Driver waits till seated	32	46	78
Lower step	34	35	69
Seat assured	17	47	64
Door-to-door service	22	40	62
Handrails	17	44	61
Announce stops	12	49	61
Assistance on/off	20	24	44
Curb cuts	4	5	9
Lifts	5	3	8
Other*	16	12	28

*Includes stopping at curb, larger markings, automatic doors, courtesy for the elderly, benches, and more frequent service.

and shopping and community centers. In urban areas most of these facilities are located within each community. While a basic regional trunk transit system with adequate feeder services is important, intracommunity transit services connecting the residential areas of E&H persons to these service facilities are even more critical. Ridership patterns on AC Transit local East Bay lines and community paratransit systems bear out this finding.

Finally, "people oriented" transit services as compared to "hardware-oriented" improvements have a potential for far greater payoff even though a good general transit service is an obvious prerequisite. AC Transit's driver "sensitivity" training, information services and priority seating for E&H persons appear to provide a very important means to attract new E&H riders, and to provide greater user-satisfaction for current passengers. Table 3 shows some of the service improvements to fixed route transit that were considered to be important by the TH passengers, according to the Crain Study.

b. South and West Bay (Santa Clara, San Mateo, San Francisco Counties)

The concentrations of senior and/or handicapped residents in this area exist within the cities of San Jose, San Francisco, and along the El Camino corridor in San Mateo County. This area contains nearly half the region's overall population of senior and TH persons; it also forms the service areas for the great majority of the region's wheelchair-accessible buses. Reduced-fare E&H ridership figures reflect these levels of population and services. Among the wheelchair-accessible public transportation in this portion of the region are included BART, SamTrans' fixed-route and Redi-Wheels buses, and the Santa Clara fixed-routes and Handicoach.

San Francisco Muni will soon begin using wheelchair-accessible buses on some of its fixed-routes, yet it already services by far the largest number of E&H riders daily. This reinforces the finding mentioned previously that E&H riders are generally intracommunity travelers. The extensive Muni system is serving both the general public and the E&H community in an exemplary fashion and provides ready transfer to most of the region's other major public transit facilities.

Santa Clara and San Mateo County Transit Districts have been area leaders in experimenting with innovative approaches to increasing TH mobility. Both systems are operating wheelchair-accessible buses both on trunk lines and in the demand-responsive mode.

Samtrans has established accessible fixed-route services along the two major north-south travel corridors in the county. These include the Coast Highway route to Half Moon Bay and along El Camino Real to Palo Alto. The latter corridor is both a residential area for a sizeable number of the county's seniors and TH, as well as a center for commercial and service facilities. Unfortunately, many of the mobility-impaired persons are unable even to walk to the nearest fixed-route bus stop. It was for this reason that SamTrans developed its special county-wide mobility service called Redi-Wheels. Redi-Wheels is a door-to-door, Dial-A-Ride type service using lift-equipped mini buses which serves as both an independent system and as a feeder to the SamTrans fixed-routes.

Our most recent population estimates indicate that about 14.4% of San Mateo County's residents are over 60 and some 6.6% are TH. Many of the TH are also elderly. Normal ridership figures from SamTrans (pre-gas crisis) show about 15% reduced fare (handicapped and/or over 65)

for the fixed-routes alone. Adding in the daily Redi-Wheels ridership of 185 persons per average day indicates an effective and well-utilized transit system for San Mateo County residents.

Because of its two-tiered mobility program, SamTrans provides perhaps our most thorough data bank for wheelchair users of transit. Out of more than 3,500 registrations for Redi-Wheels service, slightly over 600 (or 17% plus) indicate wheelchair use. These patrons seem significantly less active than other E&H persons, however. Daily lift use for Redi-Wheels is about 15 to 17 trips per day, or 9% of total ridership; lift usage on the fixed-routes has been estimated at perhaps only 50 one-way trips per month. (These figures are for use of the lift for any passengers, including wheelchairs, walkers, passengers with no aids, and baby strollers.) The most frequently cited factors for deterring wheelchair ridership are lack of space at a requested time for Redi-Wheels; and poor reliability and lack of awareness of fixed-route lift service.

Santa Clara County Transit District currently enjoys about 14% E&H ridership relative to the total fixed-route service (this percentage is somewhat lower than in previous months due to the recent influx of commuter usage; however, the actual number of E&H riders has remained constant). South County Dial-A-Ride services a similar proportion. These figures are significant because Santa Clara has the lowest percentage of senior and TH residents of any county in the region. SCCTD's very active Advisory Committees have been instrumental in devising programs and routes to meet local transportation needs, and the ridership statistics bear this out.

Santa Clara's full-accessibility policy has been hampered, as noted in the previous discussions, by mechanical problems with the lift-

equipped buses. However, more careful monitoring has recently disclosed that some of the out-of-service problems may be due to general vehicle malfunctions totally unrelated to the lift. On a recent day, for example, out of 50 lift-equipped buses in the Santa Clara fleet, a total of 34 were "down" at the start of daily service - of these, only 4 were listed as lift problems.

c. North Counties

The four northern counties of Marin, Napa, Solano and Sonoma together occupy about 53% of the region's land area, but have only 16% of the population. The urbanized parts of this area have generally good public transportation coverage, but the more rural, agricultural sectors have only small-scale services, mostly oriented toward the E&H population. Because of this orientation, many of the rural services are provided by wheelchair-accessible vehicles.

Distances between population centers in these northern counties are far greater than other urbanized areas of the Region. Service is needed both for travel to/within the smaller communities and to the larger towns. Expansion of existing demand-responsive services and implementation of new fixed-routes form the basis of proposed plans for each of the four counties. The cities of Fairfield and Santa Rosa have developed their own local bus systems which include accessible vehicles. Napa City will retrofit its coaches, and Vallejo plans to purchase new vehicles with lifts during the coming fiscal year.

Many paratransit services are operated in conjunction with non-profit social service agencies. The incorporated areas of Solano County are served under a contract arrangement with Project Move of the Economic Opportunities Council. Tri-City Bus in Napa County and Whistlestop Wheels in Marin are wheelchair-accessible systems that

are also staffed by volunteer and Senior Council members and supported by the Local Transportation Funds. Daily E&H ridership for the Golden Gate Transit District is estimated to be about 2,800, about 7.5% of the total transit patronage; a large percentage of this ridership is served by contract with the Marin County Transit District.

In the remaining 3 northern counties, the daily E&H ridership is approximately 33.5% of total transit patronage. These counties have significantly higher-than-average E&H populations relative to the total population (16.5% elderly and 8.9% TH) and the E&H ridership rate shows the result of strong local efforts to provide needed specialized transit services in these areas. Because of the topography and population distribution for these rural areas, however, the total transit ridership for these counties is relatively small.

4. Conclusion

The Bay Area region as a whole has made a serious attempt at improving E&H mobility during the past several years. The region has invested millions of dollars specifically for E&H-oriented services, with nearly \$4 million budgeted for 1979-80. This amounts to nearly 8% of the region's total UMTA Section 5 dollars for the current fiscal year. Rural areas receive no funding from this source. The rate of investment for E&H services has far exceeded the 5% of Section 5 funding as suggested in the 1976 UMTA Guidelines (the new 504 Regulations will require at most a 2% expenditure of Section 5 monies by 1982).

The region is still in the initial phases of implementation and operation for many of the planned wheelchair-accessible services, both for fixed-route and demand-responsive systems. For fixed route services, many of the buses with passenger lifts are due for delivery in the latter part

of FY 1979-80. Many of the demand-responsive and taxi-subsidy programs will complete their first full year of service to patrons during FY 1979-80. Fixed-route bus purchases are financed up to 80% by UMTA, while the operation of demand-responsive and taxi-subsidy services are financed more often by TDA and other local funds. With these services in place, the region expects noticeable improvement in E&H ridership over coming years.

The detailed analysis in the previous section has show that the level of E&H ridership depends upon a good basic public transportation system. To accomplish this, there is a need to have both the fixed-route and demand-responsive type of services. In a densely populated area such as San Francisco or the AC Transit District, a comprehensive general public transportation system provides mobility for a large portion of E&H population, despite a lack of wheelchair-accessible vehicles. The majority of elderly and TH persons are able, although with difficulty, to use the standard transit vehicles and routes. Lift-equipped vehicles can enhance service to those elderly and TH populations who are unable to climb steps, while door-to-door service through Dial-A-Ride or taxi subsidies can minimize problems for those who cannot get to or from the bus stop.

In a less densely populated area, the capability to provide extensive public transportation services is limited. These areas need a more personally oriented, demand-responsive system. As the density of population increases, a combination of coordinated basic fixed-route services and demand-responsive services best fits the needed services for E&H residents.

Financing of public transportation in general, and for E&H in particular, is a continuing challenge. Since the E&H population is scattered throughout the region, a variety of complementary and coordinated transit services

is needed to serve the variety of needs. The challenge for the region is to carefully deploy fixed-route services supplemented by demand-responsive services based on identified E&H travel patterns.

D. Outreach, Support Services and Passenger Amenities

1. Description

Although most of the legislative thrust in the field of E&H transit accessibility has dealt with the question of wheelchair lifts and/or ramps, there are, of course, other methods of increasing the "usability" of the public systems. Area operators are implementing human relations programs that attempt to reduce many of the real and perceived problems that deter some older and semi-disabled persons from using the systems.

The physical ability to enter the vehicle or to walk to a bus stop is only one of the many "barriers" that must be crossed in using public transit. Other major functional disabilities, especially for senior citizens, that can be regarded as "transportation handicaps" include vision problems (for reading schedules or recognizing a desired destination), balancing problems (waiting at a stop, standing in a moving bus, using escalators on BART), hearing and speech problems (in requesting travel information), and a heightened sensitivity to impolite drivers, other passengers, and/or security problems. The need to stand while waiting for a bus to arrive is one of the most frequently mentioned transit difficulties encountered by the elderly or handicapped rider.

Bay Region operators have long recognized the need to make transit service more attractive to the general public. Growing awareness of the specific needs and concerns of the E&H passenger has led to further development of special programs aimed at these groups. Whether the effort is characterized as marketing, outreach, or "special services," the aim is the same - to increase understanding and use of the public facilities by the transit-dependent population.

It is in these special programs that MTC's encouragement of a local efforts approach to E&H planning and programming has resulted in some of its most creative applications. Frequently devised in active cooperation with the local Citizen Advisory Committee (see Section E, on Citizen Participation), these programs truly reflect and serve their local populations. In addition, special programs on an areawide basis have been undertaken by MTC itself in cooperation with the Regional Transit Association.

These projects are generally considered "low capital," and rely heavily on intensive investments of personnel time and "people interest." They are thus often incorporated into projects included in the region's Transportation Systems Management Element (TSME) planning.

2. Analysis

a) Regionwide Activities

MTC instituted a Special Needs Program in 1976 as an outgrowth of its Special Transit Needs Study (1975) and Commission Resolution No. 299. Among the ongoing elements of this program include:

- Project Approval: All projects approved by MTC must include consumer participation and involvement of paratransit operators throughout the study, and consideration of alternative solutions to special needs transportation problems.
- Technical Advisory Committee: A continuing committee consisting of staff from each public transportation operator, representatives of social agencies, and concerned individuals was formed in 1976 and meets regularly to exchange information.
- Data Support: MTC's data processing services are used to collect information at the regional level. Data collection programs developed for a specific local project can sometimes be extrapolated to the rest of the region. Most of the 1970 and mid-decade census information is available from computer tapes.

- **Special Needs Newsletter:** MTC's Special Needs Newsletter is sent to more than 2400 transit operators, social service agencies, and individuals concerned with the transportation needs of the elderly and handicapped. The publication includes notice of programs and studies being carried out by the transit operators, special administrative programs, and pertinent meetings. It is issued approximately every six to eight weeks.
- **Bibliography:** A bibliography on elderly and handicapped programs was developed by the MTC librarian and distributed to the operators and social service agencies. New acquisitions are documented at regular intervals.

The Regional Transit Association (RTA) is composed of representatives of the 6 major public transit operators (AC, BART, GGBHTD, Muni, SamTrans and Santa Clara). In 1975, the operators developed eligibility criteria for the Bay Region Transit Discount Card. This uniform identification card for handicapped persons is accepted by all transit systems in the region, including the smaller local operators.

A current project of RTA's Elderly and Handicapped Committee is the proposed development of a region-wide program for passenger outreach. Plans call for the the program to include a short film, to be produced jointly by the transit properties, that will portray the many routes and methods of accessible public transportation in the Region. In addition, the operators are planning and implementing programs of "sensitivity training" for drivers and other personnel.

The purpose of such driver training is to increase the vehicle operators' awareness of the special needs and problems of the elderly and those with particular disabilities. As one example, not only will drivers learn the mechanical operation of their vehicle's lift device, but they will also participate by riding

in a wheelchair on the lift to experience the sensations that the rider will undergo.

b) Specialized Operator Activities

Each transit operator has developed programs and services that respond to the expressed needs of their local elderly and handicapped populations. All have reduced fares, as mandated by federal law; however, the amount of discount and hours of application vary widely. Most are cooperating actively with local Public Works Departments to identify intersections requiring "curb cuts" to make bus stops more accessible. All operators are expanding and improving their facilities for waiting benches and shelters, an area that is of great concern to those who tire easily from standing until a bus or rail vehicle arrives.

Teletypewriter equipment³⁷ has been installed in the Information Centers of 4 of the 6 major area operators (AC, BART, SamTrans, Santa Clara) to provide communication with hearing or speech impaired persons. (Information regarding Muni and GGBHTD transit schedules can be obtained through the AC system.) Sign language training for customer service personnel, and even for some bus drivers, has also been implemented. Among other programs are included:

- i. SamTrans has instituted a registration process for mobility-impaired persons who wish to use their door-to-door Redi-Wheels service. This self-identification program in turn serves as a bank of information on the location and needs of handicapped passengers. A periodic newsletter is also sent to registrants to keep them informed of the system's progress.

37. Also called TTYs or "Porta-printers."

- ii. Santa Clara Transit District has responded to recommendations from citizen advisors by instituting several specialized programs. Developmentally disabled students are taught the skills and procedures necessary for independent use of public transit. Also, for each route that becomes wheelchair accessible, special training sessions are conducted at major stops along the way to familiarize both handicapped and regular passengers with the new buses.
- iii. BART is producing a series of maps which will depict the layout of the 34 stations. Features will include location of restrooms, elevators, and station-agent booths. Another project includes the use of Braille and other tactile information to assist visually-impaired patrons.
- iv. Other creative outreach services are currently planned or programmed for the coming year. These include (among many others) a special "senior shopping shuttle" sponsored by Muni, an expanded Office of Coordination for E&H Services for AC and Muni, and investigating methods for Braille pole-signs and special sidewalk markings for bus stops in Santa Clara County.

3. Conclusions

Support and outreach programs involve activities more often associated with social workers than with transit planners. For this reason, they are readily denigrated as less important to the overall transit effort. In addition, the relatively limited funds required and expended for such programs are dwarfed by the financial requirements of bus procurement and general operations. However, whenever

TH persons are questioned regarding preferred changes that would improve their use of transit, the responses invariably include such "details" as "driver waits until you sit down" or "always having a seat available."³⁸ An extensive survey conducted for UMTA in San Diego yielded results that for both regular and infrequent passengers, the two most important characteristics of the transit system were (a) bus stop location and facilities; and (b) driver performance.³⁹ While the results of this latter study are skewed toward mobility-unimpaired passengers, they indicate a trend that merits serious consideration in planning for E&H as well as for general riders. The ingenuity and concern that has been evidenced by Bay Area operators, working through MTC and RTA, in meeting these transit related needs forms a significant component of regional E&H planning. Further development of creative programs and funding resources is to be expected as an ongoing evidence of the commitment by MTC and local operators to the improvement of transit usage.

38. Crain & Associates, AC Transit Study

39. Dinoo J. Vanier, "On the Importance of the Bus Driver," 1977

E. Public Participation and Coordination

1. Introduction

As a corollary to the development by transit operators of outreach programs to increase and enhance passenger ridership, it has become more generally recognized that consumer participation in the planning process is a valuable tool in effecting user satisfaction. Both pre-implementation phases and any subsequent problem-solving requirements can benefit from the observations and feedback from the system's riders. In a like manner, potential passengers who are currently unable to utilize a transit service can provide critical input for the removal of physical barriers, scheduling constraints, or other hindrances. Official recognition of the necessity for such nonstaff advice includes the Advisory Appendix to the 1976 UMTA Regulations whereby it is noted that, with regard to elderly and handicapped citizens, especially wheelchair users and semi-ambulatory persons, "it is presumed to be unlikely that effective project development to meet the needs of these users can occur without the assistance and cooperation of such persons."

2. Citizen Advisors to Operators

Even before the finalization of the UMTA requirements, both MTC and individual local systems had begun to solicit public input on various aspects of public transit operations. The decision to install elevators in BART stations was largely influenced by active lobbying and consultative efforts by local handicapped individuals. Since 1970, the Task Force on Access for Elderly and Handicapped Persons has assisted BART staff in improving facilities and services to eliminate transit barriers.

One of the early leaders among the bus operators was the Santa Clara County Transit District, which joined with the Council on Aging of Santa Clara County in May 1975 to form an organization known as CTSE (Coordination of Transportation Services for the Elderly). Twelve Senior Advisors and a Coordinator, all of whom are 65 or older, work with the Customer Services office and local senior groups. The District also formed an Ad Hoc Committee on Transportation later that same year, with duties that include a review function for all proposals affecting vehicle and program accessibility. When the City of Fairfield implemented its DART system during 1975, a Citizens Advisory Committee (CAC) played a major role in determining design priorities for the system, including the acquisition of a wheelchair accessible van. The CAC included handicapped as well as senior citizen members.

In January, 1976, MTC approved Resolution No. 299, which called on local operators to devise accessible programs for E&H passengers. Each of the technical studies conducted in response to the MTC initiative included a Citizens' Advisory Committee (CAC) with active representation by both senior and handicapped individuals and organizations. Most of these Committees have continued ongoing advisory functions for their respective Transit District or county. Technical Advisory Committees have been called upon to provide specific criteria and evaluation of wheelchair lift implementation programs.

3. Citizen Advisors to MTC

MTC's Resolution No. 316 (June 1976) calls for each Commissioner to appoint one senior and one handicapped advisor "concerning issues

related to transportation needs and services for handicapped and senior citizens." This resolution was initiated as a response to the UMTA draft regulations of 1976, and was itself finalized in a coordinated effort with active senior and handicapped representatives from the Region. An evaluation of the effectiveness of the Advisor Program concluded that the results have been "very successful" and the advisory functions are now considered an integral component of staff and Commission planning. (Appendix 4 lists the Advisors who have been appointed by the current Commissioners.)

4. Paratransit Coordination

In August 1977, MTC adopted Resolution No. 468, which asks each of the nine counties in the Bay Region to establish a countywide Paratransit Coordinating Council (PCC), "for the purposes of using all available revenues to the best advantage in improving the availability of transportation services for the elderly and handicapped." PCC membership includes social service agencies, private paratransit operators, individual consumers and the local public transit systems. As of May 1979, the Supervisors of six counties had approved the establishment of a PCC and initial meetings have been held by each. Naturally, each PCC will devise its own solutions and alternatives for the transportation needs of their local citizens. The participation of the public operators in these Councils is expected to foster more cooperative efforts toward the two-tiered regional transit network described in Section III B (Vehicle Accessibility).

MTC's recently updated Social Service Agency Survey includes information on vehicle ownership and client transportation for over 2100 organizations in the Bay Area. Of those agencies, schools, and

hospitals for whom transportation is a nonprimary function, an inventory of wheelchair-accessible vehicles indicates a total of over 300 such vehicles in the Region.⁴⁰ Due to funding and/or organizational constraints, many of these vehicles are currently restricted to a particular clientele. One of the objectives of the PCCs will be to investigate ways to more effectively utilize the existing vehicle fleets, in order to provide an improved level of service on a broader range of accessibility.

5. Conclusion

The "good faith efforts" standard in planning accessible services has in general been effectively improved through the Region by the active participation of local senior and handicapped individuals and organizations. This public interest component is not expected to diminish; if anything, more vocal recommendations for improvement are to be expected. The 504 Regulations provide a significant role to CACs and other interested consumer representatives to determine appropriate standards for accessible interim service and to provide input into the transition plan. The Region's existing structures of Advisory groups and PCCs provides a solid base of well-informed and involved citizenry to fill this role.

40. See Appendix 5 for County subtotals. The information in Appendix 5 does not include paratransit systems which are receiving direct or indirect state TDA transportation funding, such as Whistlestop Wheels, DART or Canon Kip. These latter are included in the "Inventory of Accessible Public Transit" in Appendix 3.

F. Technical Studies

On January 28, 1976, the Metropolitan Transportation Commission adopted Resolution No. 299 which stated in part that:

"the Overall Work Program for fiscal year 1976-77 will include, and give priority to, essential technical planning studies to support the development and implementation of programs by public mass transportation operators which are consistent with MTC's goals, objectives, and policies for making transportation services reasonably accessible to handicapped persons."

In response to this directive and through MTC-funded planning support, several of the major transit operators undertook studies and surveys to identify the location and transit needs of both elderly and handicapped persons within their service areas, and to develop recommended solutions to meeting such needs. In addition, counties without public mass transit services sought similar data for inclusion within their Transportation Development Plans. At the same time, related studies were conducted in connection with the PENTAP and BART Impact programs. A description of major technical reports in this area is summarized below.

1. AC Transit

On January 26, 1977, the AC Transit Board of Directors approved the planning and work program for the District's study. A Technical Support Committee (TSC), composed of representatives of Social Service Agencies and other paratransit organizations, provided operational and behavioral perspectives on travel needs and patterns of the target groups. Citizen Advisors also participated in the study process and allowed input from the consumers' viewpoint.

A professional consultant firm, Crain and Associates, was contracted to prepare and coordinate the study. Major tasks included:

1. Analysis of Needs
2. Development of Alternatives
3. Evaluation of Alternatives
4. Implementation Programming
5. Final Report

The 6-month study was based on a telephone survey, a self-identification survey and a Social Agency Vehicle Utilization Survey, helping to identify transportation handicapped (TH) people's transit needs and services. It was found that there are approximately 66,000 TH persons in the AC Transit service area, or about 5.9% of the total population.

The most difficult problems in using the current vehicles and route system are: keeping balance in a moving bus (a serious or impossible problem for 45% of the TH), waiting standing for 10 minutes (36%), walking 3 blocks to a bus stop (35%), and getting on or off the bus (30%).

An estimated 100,000 one-way trips are made daily in the area by the TH using all modes of transportation; some 29,000 of these trips are served by AC Transit. The estimated latent transit demand⁴¹ in the area is about 7700 trips per day.

The study identified 6 "components" of improved mobility services for the TH. These components were combined into "packages" of Total Need Systems and Cost-limited Alternatives to determine optional and interim feasible steps to be considered by the District.

"Component 1" of the analysis included a series of low-capital programs, none of which involved any hardware modifications to buses. These included driver

41. Potential transit trips not currently served.

training, priority seating, improved information and outreach, teletype availability, off peak group service, and more benches and shelters. These relatively simple changes would provide noticeable improvements in service to both the TH and general ridership. Other "components" studied were:

- lower steps and more handrails
- wheelchair accessible fixed route vehicles
- District-operated Dial-A-Ride
- Contract Dial-A-Ride
- Taxi and chair-car user subsidies

The study made no recommendations as to the best course of action for the District to adopt to attain accessibility for local handicapped residents. Following the presentation of the report, the Board of Directors voted on October 26, 1977, to adopt a provisional policy of fully-accessible fixed route purchases. The policy stated that only lift-equipped buses would be bought if available equipment were proven to be "reliable, safe, and operable", subject to the availability of sufficient capital and operating funds.

The low capital package of Component 1 was adopted without reservation.

2. Marin County

The study of "Transportation Services for the Elderly and Handicapped: Marin County" was authorized under a Joint Exercise of Powers Agreement (JEPA) among the Golden Gate District (GGBHTD), Marin County Transit District, Marin County Superintendent of Schools, and MTC. The Steering Committee included representatives of the 4 JEPA agencies and 3 sponsoring transit users' groups (Volunteer Bureau, Senior Coordinating Council, and the Consumer's Panel).

The Study was conducted by the Center for Planning and Development Research of the University of California, and was presented to the JEPA agencies in August 1977. Subsequent months were devoted to development of an Implementation Plan for the County.

The Study was comprised of two major sections: 1) Analysis of Needs; and 2) Development and Evaluation of Alternative Services (including recommended plan).

It was determined that there are some 27,500 transportation handicapped residents of the County. "Of these, approximately 17,000 persons could use existing transportation services if the existing systems went where they wanted to go when they wanted to travel." Thus the need was emphasized for improved public transit as well as provision of special transit facilities.

Current public transit is provided by Golden Gate District (GGBHTD) for inter-county travel from Marin County to San Francisco and Sonoma counties. This includes both bus and ferry service. Intra-county travel is served by Marin County Transit District through contract with GGBHTD. In the paratransit sector the Whistlestop Wheels (WW) Program, sponsored by the Senior Coordinating Council, provides service for shopping, recreation, education, nutrition, and transbay medical purposes for some 5,000 elderly and 2,300 handicapped one-way trips per month. WW uses 14 vehicles, of which three are lift-equipped.

The plan discussed changes and improvements to the service in 8 "qualitative" areas: education of both users and drivers; information services; routes and schedules; equipment (low-capital as well as lifts); level of service; access to transit systems; financial; and policy.

A series of 4 workshops on the Needs Study and Recommended Plan was sponsored by the Consumer's Panel. These went far beyond the minimum requirements for user input by providing significant articulation of perceived requirements for local transit. The need for improved services in the rural areas was especially noted.

In conclusion the study presented a "Recommended Plan" based on an evaluation of existing and alternative services and comments received from the Operators Panel and Consumers' Workshops. Elements of this proposal included:

- Coordination of public and para-transit information, resources, and funding.
- Improved information, education and local programs.
- More signs, shelters, bus stops.
- Vehicle accessibility and general improvement.
- A better "match" of short trips, long-distance trips, special needs services, and emergency service.

Marin Transit intends to begin implementation of the recommended improvements and is planning a sales tax ballot - initiative as a major element of funding for the program. GGBHTD will provide base and commute operation, while Marin Transit will have responsibility for local, intra-county service.

3. Sonoma County

The Sonoma County Board of Supervisors ordered a study of elderly and handicapped transportation on June 6, 1977. Subsequently, in response to MTC Resolution No. 557, which required the preparation of a county-wide 5-year plan, the scope of the study was expanded to include the elderly and

handicapped element of such a plan. The Final Report, encompassing both segments, was released by the County Department of Public Works in January 1979.

The primary methodology of the Study was development and distribution of a survey to assess the level of unmet transportation needs within the County. Approximately 830 responses were received, with the greatest desire expressed for increased access to medical and shopping facilities. Particular need was for service for the unincorporated areas, especially into Petaluma or Santa Rosa.

The great majority of respondents indicated an ability to use existing public transit if the level of service and routings were improved. However, some 30-40% of the desired trips would require more specialized service such as door-to-door systems, personal assistance, or wheelchair lifts.

Citizens Advisory Meetings were held at 9 locations throughout the County to determine specific local needs. Comments were gathered to provide input for the Recommended Plan. Although generalized intra-urban services were quite favorably received, several areas of concern were noted. Among these were the desire to travel from rural into urban areas, service for Sonoma State Hospital, preference for door-to-door service in low-density areas, and concern about fare levels.

Three Alternatives were devised for evaluation and one (Plan B below) was recommended. Briefly, these included:

Plan A: Maintain current systems and services at present levels. This plan was rejected as inadequate to satisfy transit needs.

Plan B: Specifies expansion of paratransit services, develop 3 to 4 new fixed-route services, improve intra-city systems, and subsidize Greyhound and taxi users.

Plan C: Provides for extensive fixed-route and Dial-A-Ride services, including several restricted to special needs, plus a Summer Coastal Shuttle. This plan would "probably meet most of the unmet transportation needs," but was rejected as unfeasible because of the high costs involved.

The Recommended Plan was adopted by the County Board of Supervisors as Sonoma County's 5-Year Transportation Plan and several of the included proposals have already begun operation.

4. Napa County

In January, 1977, the Napa County Department of Public Works presented a Work Outline for a proposed Transit Special Needs Study to MTC. One stated purpose was "to provide for unmet needs for essential trips by the elderly and handicapped." This ultimately became articulated as the Study's goal: to " . . . Insure adequate access to transit for the low mobility elderly and handicapped."

The Study was conducted by the County Public Works Department with the advice and assistance of a Technical Committee composed of representatives of transit and para-transit providers and a Citizen Committee of 12 representatives of elderly and handicapped organizations and transit users. The Citizen Committee felt that the study goal was too narrow to satisfy their perceived transit needs. Therefore, the scope of discussion in the Report was broadened to include general mobility problems of the elderly and handicapped.

The Study inventoried existing transit and paratransit services and surveyed social service organizations to determine further levels of need. Of the three public transit operations - County Dial-A-Ride, Tri-City Bus, and Napa City - only the latter currently has non-wheelchair-accessible vehicles. However, requests for the first two demand-responsive systems are on an advance-reservation basis only and far exceed the number of trips available.

The Study discussed three alternative levels of service that would provide at least a minimal standard of access to all transit vehicles:

Level 1 included education, information, and coordination as well as retrofitting of the five Napa City buses.

Level 2 would increase accessibility and level of service, without additional buses. It would include expanded service hours as well as taxi and Greyhound subsidies.

Level 3 would add both vehicles and drivers to the three public systems.

County staff recommended Level 1 as adequate to achieve accessibility, within current funding availability. Both MTC and the Citizen Committee disagreed with this recommendation and stressed the need for increased level of service for all users. Subsequently, the County Plan has been augmented to increase the days and hours of Tri-City Bus Service and to increase the frequency of inter-city service for unincorporated areas. Finally, the County will retain a Transit Coordinator to initiate and evaluate these operations.

5. San Francisco Muni

Two studies have recently been conducted on accessibility for the San Francisco Municipal Railway.

a. Muni Metro Accessibility Study (June 1977)

The Muni Metro Light Rail Vehicle (LRV) system will replace the existing streetcar system and connect to BART stations in the downtown area. Design of the vehicles is such that they will be level - accessible at underground stations, but will have step entry at surface street stops.

The study investigated two alternate modes of access: elevated mini-platforms at all street stops or car-mounted wheelchair lifts. A lift similar to that currently being developed by the Boeing Vertol Company was preferred as most compatible with the planned fare collection process and as providing a more flexible means of access to vehicles. Development and testing of a prototype was recommended.

As an alternative, the study discussed the feasibility of raised access platforms at transit stops in the outer neighborhoods (similar to existing "islands" on the Market Street streetcar system). Specific locations were discussed in terms of construction and configuration requirements, traffic impact, and fare collection procedures. Although this mode was deemed to be less desirable than the on-board lift, a prototype platform and demonstration project was recommended should the lift prove unsuitable. However, no final determination has been made for the system, and the LRVs are not expected to be wheelchair accessible when the Muni Metro begins operation in 1980.

b. Elderly and Handicapped Study

In May of 1977, the City PUC approved a project to identify the location and transit needs of elderly and handicapped residents of the City. The final report was completed in January, 1979.

The study estimated the number of elderly, handicapped, and TH persons in San Francisco and determined that there are some 59,300 persons who have difficulty using present Muni services. The study evaluated six service alternatives:

- Muni-operated Dial-A-Ride (DAR)
- Contract DAR
- Subsidized taxi service
- Partial accessibility on all fixed-routes
- "Specified route" accessibility
- Full accessibility on all MUNI routes and vehicles

In light of legal mandates and the desire to accommodate "mainstreaming" of the desire of the handicapped, it was determined that the most compliant and cost-effective system would be the fully accessible fixed route service. This was estimated to be able to provide some 181,600 additional trips per month for transportation-handicapped persons.

6. BART

As a response to MTC's Resolution No. 299, BART staff has been working to compile a series of maps that depict the layout and facilities for each BART station. These maps are expected to be published in a conveniently carried booklet form for the use of E&H passengers.

a. BART Impact Program

Although not specifically in response to Resolution No. 299, the BART Impact Program studies have produced several reports addressing the system's services to elderly and handicapped passengers. These reports were prepared by MTC under contract with the U.S. Departments of Transportation and Housing & Urban Development. Among the documents which relate specifically to the needs of the mobility impaired populace are included:

BART and the Handicapped (Working Paper, November 1974)

The Provision and the Use of the BART Facilities for Disabled Persons (Working Paper, November 1977)

Implications of BART's Mobility and Accessibility Impacts for the Transportation Disadvantaged (Technical Memo, April, 1978)

7. PENTAP Transit Dependent Study (completed December, 1978)

During 1976, MTC completed a study on alternative forms of transit development within the three counties (San Francisco, San Mateo, Santa Clara) on the San Francisco Peninsula. The study was known as the Peninsula Transit Alternatives Project (PENTAP). The Transit Dependent Study was conducted in response to the State Legislature's Mandate to determine the extent to which the travel needs of transit dependent persons⁴² are being met by the rail commute service of the Southern Pacific Transportation Company (SP). The Study specifically investigated five neighborhood areas served by SP stations and included both general

42. For the purpose of this Study, the Legislature defined transit dependent persons as the handicapped, the economically disadvantaged, the aged and racial minorities.

and specific recommendations for improved service to transit dependent passengers. Because of administrative hearings on SP's request to discontinue commute service altogether, however, little action has been under taken regarding the Study's findings.

IV. EVALUATION

A. Introduction

The history of provision of accessible transportation services has in many ways paralleled other civil rights movements of recent decades. The concept of "separate but equal" transit facilities has been roundly rejected by many of its purported beneficiaries as both discriminatory and inefficient. At the same time less vocal (and often less active and older) disabled people have expressed a preference for the comparative safety and personal attention of the specialized services. Ideally, both levels of bus service would be available to everyone, but limited public funding constraints such a possibility. The era of Proposition 13 has not yet inflicted serious curtailments of transit service in California although it has hampered the ability to expand or initiate new programs; however new ballot proposals may endanger current state and local funding sources.

SamTrans probably comes closest to fulfilling this ideal within its service territory by its operation of the county-wide Redi-Wheels door-to-door program as both complement and supplement to its existing fleet of accessible fixed-route buses. The City of Santa Rosa provides subsidy funding to a non-profit special service for elderly and handicapped residents, while Fairfield provides Dial-A-Ride service to all passengers (a fixed-route system is planned for implementation by 1982). Santa Clara County Transit has planned and begun some of the more creative approaches to E&H transportation problems of daily operations and maintenance of its regular service. Other bus operators and municipalities have preferred to contract for low-fare and accessible services for those residents unable to effectively utilize the present systems; TDA Article 4.5 funds have been especially expended for such programs.

MTC has played an increasingly strong role in fostering efforts toward local, as well as regional, coordination of improved transit services. The Commission's commitment to serving all transit-dependent citizens has found expression through such adoptions as Resolution 467, 468 and 679. These local actions require a more stringent schedule of wheelchair accessible procurement than do the UMTA 504 regulations; MTC's policy of paratransit coordination has also anticipated the new federal requirements in this particular area. It is expected that the Paratransit Coordinating Council the (PCCs) will play a significant role in coordinating the provision of "interim accessible services" with regional operators.

The purpose of this section of the plan is to consolidate the Region's accomplishments to date in the areas of E&H planning and program implementation, together with the operator efforts which will provide future improvements in the field.

B. Operators' Goals and Policies

1. BART

BART was the first rapid rail system in the nation to be constructed so that its facilities are accessible to all potential passengers, including those in wheelchairs. Many of the original operating concepts for the system upheld modern notions of equal service by providing features that allowed a more comfortable ride for all passengers, whether handicapped or not. Such amenities included level-loading platforms, wide train doors and service gates, escalators and a planned seat for every passenger. BART's 1965 Manual of Architectural Standards followed closely what were then purely voluntary specifications relating to accessibility of public buildings and facilities. The BARTD Board's 1968 decision to install elevators in system stations has subsequently proven useful not only for wheelchair passengers, but also for those with other ambulatory and respiratory disabilities, or with grocery carts, baby strollers, and bicycles.

One of the overall goals upon which planning of District services is based is to "increase ridership and utilization" of the BART system. More specifically, the District's aim regarding services for the elderly and handicapped is to:

"Increase elderly and handicapped ridership through the development and implementation of programs aimed at reducing barriers, thereby making the system more accessible."

2. Buses

Local bus operators have generally been faced with a technological dilemma in their attempts to provide accessible service to wheelchair residents. However, as institutional and policy considerations, the expressed awareness of, and concern for, the problem has taken many forms. This report considers that the particular phrasology of any such goals is secondary to the timing and subsequent developments from such sensitivity.

The earliest adoption of policy regarding transit accessibility occurred in this Region in early 1975. In March of that year, the San Francisco Board of Supervisors adopted a resolution for the Municipal Railway that "full accessibility is the eventual goal." At about the same time the Citizens Advisory Committee for the planned Fairfield DART determined that service of special needs was a priority goal for the system; Fairfield also took the additional step of ensuring that one of the door-to-door vehicles be equipped with a passenger lift.

Policies of system-wide full accessibility were adopted during 1976 by Santa Clara County, Santa Rosa, and the San Francisco PUC, and in 1977 by SamTrans and AC Transit. To date, the Board of GGBHTD has not adopted an accessibility statement. Specific goals and objectives for the actual level of service to E&H passengers are contained in the 5-year Short-Range Plans of all bus operators except Muni and Golden Gate.

It should be noted that the adoption of such policies has in several instances served to confirm a far-sighted District's already implemented services rather than to merely point to future directions. This is especially true for the Santa Clara and San Mateo County systems, where accessible operations pre-dated the policy statements. With regard to the latter service, mention should be made of a recent transmittal from the U.S. Architectural and Transportation Barriers Compliance Board to the General Manager of SamTrans, reading in part:

"... Keep up your fine efforts in behalf of disabled consumers in San Mateo County. Your work in providing fixed route accessible buses and in other transportation for handicapped persons is reflective of a deep commitment to a public system usable by all persons, disabled and able-bodied."

C. Deployment Plans and Supplemental Services

1. AC Transit Service Area

a) AC Transit is currently finalizing its deployment plans for the next two years, based on an expected delivery of about 175 lift-equipped vehicles in mid-1980 and 75 additional buses in 1981. The strategy has been developed from consultations between the District and the Advisory Committee on Accessibility.

Basically, AC Transit's approach has been to select radial routes for initial accessibility to allow passengers both maximum distances and proximity to downtown areas. All the chosen routes allow transfer to at least one BART station, and all BART stations within the regular service area, with the exception of Lake Merritt, will be included. The routes also provide access to a broad spectrum of medical, educational and shopping facilities.

As of this writing, the District had not made a final determination as to whether all buses on each prioritized route would be lift-equipped, or only selected runs. However, new schedules will be printed to inform passengers which buses have the accessibility feature.

b) AC Transit is also in the process of retrofitting 36 buses on its BART Express commuter service to eastern areas of Alameda and Contra Costa counties. This arrangement provides operation from out-lying areas beyond AC's regular service district (e.g., Livermore, Pinole, Martinez) to certain BART stations (Concord, Walnut Creek, Del Norte, Bay Fair, Hayward). During commute hours these buses are generally quite crowded and a wheelchair user would probably experience significant difficulty. Offpeak, such problems would be diminished.

c) As a supplement to the transit services provided by the AC District, TDA Article 4.5 programs provide a significant level of local planning and input to programs that specifically satisfy local needs. Within the East Bay area, TDA Article 4.5 services are provided to elderly and handicapped persons primarily as subsidized taxi or Dial-A-Ride systems. Wheelchair-accessible systems currently operate in Hayward, Oakland, and El Cerrito. Beginning with FY 1979-80, Community Transit Services programs in Fremont, Newark, Albany, North Alameda County, and Western Contra Costa County will be expanded or implemented with wheelchair components under this funding program. During FY 1978-79, more than \$720,000 was budgeted on 11 such systems in Alameda and Contra Costa Counties; an even greater commitment to services is anticipated during this coming year.

2. Santa Clara County

a) Santa Clara is undergoing expansion of its bus fleet and plans to

reach a total of 516 accessible vehicles by 1982. The first stage of this program consists of both new and retrofitted lift equipment during 1978-80.

Santa Clara's deployment plan for lift-equipped coaches is strongly influenced by recommendations from the Ad Hoc Committee on Transportation for the Handicapped, and reflects the passengers' experience with the now-accessible Routes #18 and #64. Among the Ad Hoc Committee's current priorities are included:

1. Increased service to medical, ~~rehab~~ilitation, and civic facilities.
2. Accessible service to destinations in Palo Alto.
3. South County Dial-A-Ride should be fully serviced by lift-equipped minibuses.

The County's responsiveness to such perceived and articulated needs of the E & H community is one of the factors that has characterized the positive working relationship that has been developed between these groups.

Unfortunately, mechanical and contractual difficulties have delayed the implementation of much of Santa Clara's deployment plan. Nevertheless, County's commitment to a fully-accessible transit system has not been diminished. Although the time-frame will need adjustment, the County still expects to complete the purchase and retrofit program for its entire fleet by early 1981, which will still far exceed the requirements of UMTA's 504 regulations.

- b) Santa Clara County cities have budgeted over \$533,000 on specialized transit services for seniors and handicapped during 1978-79, with about 61% of funding supplied by TDA Article 4.5. Nine cities participated in the program last year, and there is one additional claim submission for the next fiscal year. During 1979-80, the existing Community Transit

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Services in San Jose, Los Gatos/Saratoga/Monte Sereno, and Palo Alto will add wheelchair accessible components to their systems.

3. Other Operators' Strategies and Plans

The time lag between ordering and delivery of new transit vehicles is currently running at about 18 months. Additional on-site preparation time is usually required before the buses are put into passenger service, so it is not unusual for an operator to experience a two-year delay between TIP programming of vehicles and eventual revenue useage. For this reason, while operators should be developing basic strategy approaches for the deployment of new equipment, it may not yet be necessary or viable to determine the specific route assignments. For those operators in the Region who have lift-equipped buses either on order or programmed for purchase, some approaches to deployment of these vehicles are discussed below:

MUNI is expected to be the next recipient of accessible coaches, with 25 Flxible ADB's scheduled for delivery in Fall of 1979. These are planned for 1) routes which serve the City's concentrations of handicapped residences and preferred destinations and 2) routes which connect to other accessible public transit (BART, SamTrans, GGBHTD, ferries.) With additional purchases of 100 buses each in 1981 and 1983, MUNI is expected to attain the 50% program accessibility standard by 1985. In addition, MUNI is currently revising its routing and scheduling as adopted in the 5-year plan (SRTP). Of the proposed 64 routes in the Plan, 54 would directly serve one or more BART stations.

Golden Gate will be retrofitting 10 articulated buses for local and feeder service in Marin County. The ferries are also wheelchair-accessible, as are the terminal facilities. Twelve additional buses will be ordered for

service within Marin County. There are no current plans for GGBHTD to operate accessible-bus service into San Francisco, **since** transbay trips are provided to the elderly, handicapped, and ill by **contract with** Marin Senior Coordinating Council. Other bus purchases as presently programmed indicate that Golden Gate expects to reach 50% accessibility as of 1984.

SamTrans will soon order about 100 buses through a combination of two UMTA grants. These will be used first to supplement and expand the Main-line and Coastside routes, so that every bus along these lines can be reliably accessible. With an additional purchase of 50 buses, expected for delivery in 1982, SamTrans should meet the UMTA guidelines for 50% accessible buses within the 3-year limit.

Santa Rosa's goal is to have at least every other bus on each route equipped with a passenger lift. Currently two of their ten routes are served solely by lift buses. Based on the current T.I.P., which anticipates both replacement and expansion of services, Santa Rosa's fleet will be 85% accessible by 1982.

Vallejo's city buses have all been recently outfitted with a retractable lower step to facilitate entry for passengers. They will be ordering 5 lift-equipped buses during the next fiscal year (one per route) as replacements for some older stock. However, since the fleet size is currently at 19, no determination has been made of when the 50% standard will be attained.

The City of Fairfield is planning to apply for federal assistance under UMTA Section 18 for new fixed-route buses in 1980 and replacement Dial-A-Ride vehicles in 1982. All will be wheelchair-accessible. Additionally, five replacement vehicles for the current DART fleet are expected to arrive in late 1979 or early 1980; all will be lift-equipped.

The City of Napa is planning to retrofit its entire 5-bus fleet with

Vapor-lifts during the latter part of 1979. The City of Livermore, which has one of the newer municipal bus systems in the region, has recently received MTC grant approval to purchase 6 lift-equipped coaches for local service.

Conclusion

There are two basic approaches to the deployment of vehicles equipped with passenger lifts. One is to distribute the buses evenly throughout the system so that everyone has an equal opportunity for access. This method requires a close coordination with the operation's information services, so that a passenger wishing to use the lift can carefully plan his schedule and route selection. This approach is preferred by the smaller operators such as Santa Rosa and Vallejo, who have only a relatively few number of routes for the passenger to choose among.

The second strategy is to fully access selected routes which are known to serve major handicapped destinations and residence areas. The philosophy behind this approach is that the passenger will be able to rely on lift service at any time or at any point along the route. This strategy has been recommended by the Handicapped Advisory Committees of AC, SamTrans and Santa Clara and adopted by those operators. The Citizens' committees have also played a major role in selecting the priority of routes to be lift equipped.

MTC supports both of these approaches, when developed by appropriate consultation with citizen-consumers, as reflective of the local efforts by operators in meeting transit needs of their E&H population.

Finally, it should be noted that the 504 Regulations require the operators to submit information on their "policies and practices" regarding

accessible vehicles. As input into the Regional Transition Plan, this implies at least a tentative schedule of new vehicle purchases and deployment to "cover the entire period required to achieve program accessibility." For most operators, the procurement plans are determined by reference to the current T.I.P. However, actual delivery and deployment depends greatly on the availability of adequate Federal financial assistance.

D. Funding Expenditures

One of the approaches previously suggested as means of satisfying the "special efforts" requirements of the 1976 UMTA/FHWA E&H regulations was the expenditure, by each operator of an amount equal to 5% of their Section 5 apportionment under the UMT Act. Under newly adopted 504 Regulations, if an operator does not attain "program accessibility" (50% of a fixed-route bus system's peak fleet) by 1982, then "interim services" must be provided at a cost of 2% (or equivalent) of Section 5 funding, at least until accessibility is achieved. However, this latter (2%) expenditure is considered a maximum requirement.

Identifying the attainment of these goals is problematical because in many instances the "special costs" are buried within an operator's general budget for operations, customer services, or staff wages. More specifically, the Section 15 (FARE) Accounting Reports required by UMTA contain no line-item specifications which can be readily connected with the provision of such services.

Table 4 compares the spending requirements under the older 1976 regulations (5%) and new 504 (2%) regulations with those expenditures which have been identified by each operator and/or service area for next fiscal year. However, the following calculations for the total budget figures should be noted:

TABLE 4
Expenditures for E&H Services
by Bay Region Transit Operators

<u>Operator</u>	<u>2% of Sec. 5 (504 Requirements)</u>	<u>5% of Sec. 5 (1976 Regulations)</u>	<u>1979-80 Current Services</u>
AC	*	\$569,162	\$1,060,628
BART	*	140,000	254,500
GGBHTD	\$49,574	123,687	208,604
MUNI	214,365	535,912	391,572
SamTrans	*	386,792	805,000
Santa Clara	*	541,047	895,502
Santa Rosa	*	15,109	45,500
Vallejo	11,349	28,373	60,150
Regional Total	\$275,189	\$2,340,082	\$3,721,456

* These operators already meet or are expected to meet by 1982, the requirements for program accessibility for vehicle fleets, and would thus be exempt from the 2% expenditure requirement.

1. Percentages for UMTA Section 5 funding are based on the total of preliminary 1979-80 operating grants, plus estimated 1978-79 capital allocations.
2. "Current Services" expenditures for each operator include 1979-80 budget estimates plus TDA Article 4.5 allocations for the respective county. For purposes of this table, this total does not include capital costs of new or retrofitted lift equipment, since delivery dates on these items are generally uncertain.
3. Although all UMTA-assisted operators are included here for comparison, it should be noted that not all will be required to spend the 2% level as of 1982. BART already meets the accessibility requirements of the 504 Regulations and it is expected that AC, SamTrans, Santa Clara, and Santa Rosa will each attain "program accessibility" by or before the deadline. Fairfield is not included here since it is currently outside the urbanized areas eligible for UMTA Section 5 funding.

V. RECOMMENDATIONS

A. General

1. One Year

43

According to planning provisions of the new UMTA regulations, operators must submit a "Compliance Evaluation" of their "policies and practices" which affect accessibility, within 6 months of the effective date (i.e., by January 2, 1980). Among the areas to be addressed include driver training, safety, paratransit and intermodal coordination, marketing, and management practices. This information would appear to be a major input into the Regional Transition Plan, to be prepared by MTC, which is due to UMTA in July, 1980. More detailed guidelines as to both UMTA's and MTC's requirements should be forwarded to operators as soon as possible.

The regulations require the active participation of handicapped citizens at all levels of the compliance and transition planning. Most operators already have such committees. The membership of such committees should be included in operators' reports.

The Transition Plan, to be prepared by MTC, is expected to cover "the entire period needed to achieve program accessibility." It should be noted that this time can extend to 20 or 30 years depending on the rate of "accessing" for the Muni Metro and/or Southern Pacific. (See Table 5 for the timetable of improvements under the 504 Regulations.) While most bus operators expect to achieve the 50% standard within the 5-year "generation" of the current TIP, this is contingent upon adequate levels of federal financial assistance.

Interface and transfer arrangements are to be addressed in the compliance evaluations, but the actual implementations of such coordination will be a major effort in itself. Upcoming MTC projects on inter-system coordination should include an E&H element in line with the 504 policies.

43. Sections 27.11(c) and 27.95.

2. Five Years

According to current TIP projections, most of the region's operators will be well on their way to program accessibility by 1984. This seems an appropriate "check-up" point to determine the success of various services related to improved E&H mobility. Although an annual status report will be filed for each year after the effective date, a summary progress report should discuss the entire program with the perspective of time. Among other elements to be included should be usage of passenger lifts, amenities programs (benches, shelters, curb cuts), and the progress toward attainment of interservice/intermodal coordination. Also, an update on vehicle purchase schedules and deployment plans should be prepared. Outreach and "sensitivity training" programs should be evaluated.

Passenger surveys of both handicapped and ambulatory, as well as non-riders, should test perceptions of service level, reliability, and attainment of 504 goals. In addition, updated information from the 1980 census data-base will be available by this time, and is expected to include specific responses regarding the transportation-handicapped population. This can provide more accurate input for projections of further planning and implementation requirements.

TABLE 5

Timetable for USDOT 504 Regulations

6 Months (Jan. 1, 1980)	* Compliance Evaluations (prepared by operators) -identify and prepare schedule for policies and practices (Report due to Congress on light and commuter rail accessibility.)
1 Year (July 1, 1980)	* Transition Plan (prepared by MTC) -requires public hearing -must be "endorsed" by operators
(Through Year 3)	Annual Element of TIP must exhibit "reasonable effort in programming" (equal to 2% of Section 5)
-- ? --	* Waiver request for Muni Streetcars can be submitted to UMTA only after transition plan is approved and MTC has "developed arrangements for alternative service"
-- ? --	UMTA Administrator's discretion allowed for "other forms of mass transportation" - includes trackless trolleys, ferries, cable cars.
2 Years (plus)	"Annual Status Report on Compliance" (prepared by MTC)
-- ? --	* Periodic reappraisal and refinement of Transition Plan (prepared by MTC)
3 Years (July 1, 1982)	Bus operators: "Program Accessibility" <u>or</u> "Interim Accessible Service" -limit for modification on "policies and practices"
3½ Years (Jan. 1, 1983)	New commuter (SP) and light rail vehicles (Muni Metro) must be accessible
10 Years	Limit for fixed-route bus systems Limit for commuter rail vehicles
12 Years	Assessment report due on commuter/light rail
20 Years	Limit for light rail systems (assuming no waiver)
30 Years	Limit for commuter rail fixed facilities

*Requires public input

Note: This summary does not include employment requirements.

B. MTC Policies and Programs

1. Driver "Sensitivity" Training and Passenger Outreach are probably the most important non-hardware expenditures toward improving E&H use of transit. RTA is seeking to develop regional audio-visual programs in these areas. MTC should support and/or supplement these efforts.
- 2a. Deployment of accessible vehicles on off-peak schedules should be on a regular time and route basis; marketing and information services have responsibility to publicize such timetables.
- b. "Interim services" should be allowed significant discretion on level of "door-to-door" service provided after dark.
3. Common times and cost of reduced fares for holders of the Bay Region Transit District Card should be encouraged (MTC Resolution No. 620).
- 4a. PCC's should receive formal recognition on advisory status to both MTC (see Community Transit Policy) and their respective County.
- b. Contract providers for TDA Article 4.5 services (e.g., taxis) should be required to participate in PCC.
5. Vehicles under UMTA 16(b)(2) grants should be required to be lift-equipped (Resolution No. 467 only refers to "public" operations).
6. Teletypewriter information services should be considered as part of the demonstration project for region-wide information system.
7. 504 Regulations require active and intensive citizen participation for MPO's Transition Plan. PCC Chairpersons and Senior and Handicapped Advisors to MTC Commissioners should be requested to fill this role, as well as invitations to any other interested persons.
8. Staff will recommend an appropriate resolution and schedule of actions to the Commission to ensure this region's compliance with 504.

C. Bus Accessibility and "Interim Services"

According to the DOT/504 Regulations, there are two levels of the timetable for bus-fleet accessibility.

1. If half the peak-hour fleet is accessible within 3 years (by July, 1982), the "program accessibility" standard is satisfied - AC Transit, Santa Clara, SamTrans, and Santa Rosa, according to current TIP's, will meet this requirement, if planned vehicles can be sufficiently funded. In addition, SamTrans hopes to continue its Redi-Wheels special service.
2. If accessibility will be attained in longer than 3 years (but required by 1989), then the operator must "provide or ensure the provision of" an accessible interim service. Such operators will probably include Golden Gate, Muni, and Vallejo. MTC is responsible for establishing regional standards for this service in the Transition Plan; however, any cooperative arrangements for such services should be decided by each operator.

Muni and Golden Gate have already developed working arrangements with local non-profit paratransit (Canon Kip and Whistlestop Wheels). Vallejo receives current E&H special services through both a taxi subsidy program and the Solano County EOC; the city is also considering buying its own lift-equipped van for use with the taxi service.

It should be noted that the funding support required for these interim services is at most 2% of the operator's total UMTA Section 5 money, or the equivalent, If every federally assisted operator in the entire region were inaccessible, the total expenditure required would still be less than one million dollars per year. By comparison, the total budget for Article TDA 4.5 transportation services in the three counties of Alameda, Contra Costa, and Santa Clara comes to nearly \$2.2 million for FY 1979-80. The expenditures required by the 504 Regulations for

the operators who will probably be in a position to "ensure the provision of accessible interim services" comes to less than 20% of the region's current allocations under TDA Article 4.5. Of these operators, only Vallejo is in a county which is ineligible for TDA Article 4.5; however, funding for similar programs is available under TDA Article 8.

Since the "standards" for accessible service must be set forth in the Transition Plan, it appears that MTC, "in cooperation with an advisory group of local handicapped", will have considerable discretion in determining the extent to which TDA Article 4.5 or similar programs will meet the 504 requirements. However, all such interim services must be accessible to persons in wheelchairs.

D. Individual Operators

The following is a suggested list of areas of concern that should be addressed or resolved by each operator in beginning their Compliance Evaluations. These are in addition to the items discussed in Section A, above, and are based largely on the operators' own SRTP expectations, as well as MTC resolutions and 504 requirements.

AC Transit 1. Complete implementation of driver "sensitivity" training and outreach program.

2. Evaluation of Caltrans Lift-Demonstration

BART 1. Completion of platform-edge modifications

2. Elevator and restroom improvements

3. Evaluation of Braille test-project

4. Completion of Station Map program

Golden Gate 1. Adopt accessibility policy, plus E&H goals for SRTP

2. Adopt Marin County Study/Plan, or determine alternatives

3. Consider funding alternatives to sales tax

4. Formation and participation of Handicapped Advisory Committee

5. Formation and participation in PCC

6. Plan for interim service

7. At least 25 lift-equipped buses, plus deployment plan

8. Develop service recommendations for unserved areas of Marin and Sonoma Coasts

Muni 1. Adopt E&H Plan, plus E&H service goals for SRTP

2. Formation and participation of Handicapped Advisory Committee

3. Formation and participation in PCC

4. Plan for interim service

5. Deployment strategy for lift buses

6. Determine position on accessibility for Muni Metro
7. Determine accessibility requirements for trolley-buses and cable cars
8. Determine access for SP station

SamTrans

1. Develop deployment plans for new bus acquisitions
2. Information and data-sharing on accessibility experience with other operators
3. Determine access for SP stations

Santa Clara

1. Information and data-sharing on accessibility experience with other operators
2. Improved service for South County
3. Determine access for SP stations

Santa Rosa

1. Develop accessible connection to Care-A-Van's Oakmont service
2. Complete SRTP

Vallejo

1. Schedule for program accessibility
2. Develop plan for interim service
3. Formation and participation in Solano County PCC

MTC will be actively working with all the regional operators to ensure our mutual compliance with the 504 Regulation. Guidelines for the Compliance Evaluations are being prepared to help provide a consistent approach to these requirements for all the region's operators.

APPENDIX I

Resolutions of the Metropolitan Transportation Commission Relating to Transportation for the Elderly and Handicapped

<u>Resolution No.</u>	<u>Title</u>	<u>Date Adopted</u>
299	Planning, Development, and Implementation of Programs Which Make Transportation Services Reasonably Accessible to Handicapped Persons	Dec. 29, 1975
316	Handicapped and Senior Citizen Advisors to the Commission	June 23, 1976
467	Policy for Making Transportation Services More Accessible to the Elderly and Handicapped in the San Francisco Bay Area	September 28, 1977
468	Policy for Promoting Efficient and Cooperative Use of the Resources of Public Mass Transportation, Paratransit, and Private Nonprofit Agencies in Providing Transportation Services for Elderly and Handicapped Persons	August 24, 1977
679	Policy on the Allocation and Use of Transportation Development Act (TDA) Funds for Article 4.5, Community Transit Services	June 27, 1979
714	Endorsement of the Regional Elderly and Handicapped Plan for the Nine-County Bay Area	July 25, 1979

APPENDIX 2

Chronology of E & H Developments (Federal, State & Regional)

Feb. 1968	BARTD Board of Directors approved elevator accessibility policy, pending State financial assistance.
1968	California Civil Code 45.1 guaranteed "access to transportation" to blind and disabled persons.
July 1969	Whistlestop Wheels began transportation service for Marin County Seniors.
Sept. 1970	MTC created
Oct. 1970	Section 16 added to UMTA
1971	California adopted Transportation Development Act
1971	California added Government Code Section 4500, requiring accessible "transit equipment"
1971	Transbus research begun by UMTA
Sept. 1972	BART began revenue service, accessibly (Oakland-Fremont line)
late 1972	Whistlestop Wheels began wheelchair service
June 1973	MTC's Regional Transportation Plan adopted
Aug. 1973	Section 16 (b)(2) added to UMTA
1973	Rehabilitation Act of 1973 passed, includes Section 504

April 1974	Paratransit Survey Component of MTC Special Transit Service Needs Study
August 1974	DOT Appropriations Act "None of the funds provided under this Act shall be available. . . for the purchase of motor buses. . . unless (they are) designed to meet the mass transportation needs of the E&H."
Sept. 1974	Richmond Dial-A-Ride demonstration project began operation.
Sept. 1974	BART began Transbay operations
Oct. 1974	Fairfield Flyer (subsidized taxi) began operation
Nov. 1974	Working Paper "BART and the Handicapped"
late 1974	Santa Rosa Transit implemented 2 accessible routes
Jan. 1975	Santa Clara received 4 FMC Handicoaches
Feb. 1975	MTC published <u>Special Transit Needs - Phase I</u>
Feb. 1975	Fairfield City Council approved DART design, including goal to "serve special needs of transit dependent"
Feb. 1975	UMTA issued "Codification of Requirements" for E&H
March 1975	San Francisco Board of Supervisors Resolution: "full accessibility is the eventual goal"

May 1975	Santa Clara Transit & Council on Aging formed CTSE (Coordination of Transportation Services for the Elderly)
July 1975	Fairfield DART began services with 1 accessible van
Sept. 1975	Santa Clara Line 18 began operations with accessible coaches
Sept. 1975	UMTA issued regulations on TIP planning
October 1975	Santa Clara "Ad Hoc Committee on Transportation for the Handicapped" began
1975	MTC Special Transit Needs Study approved by Work Program Committee
1975	RTA began issuing Bay Region Transit Discount Card for handicapped persons
Jan. 1976	MTC Resolution 299 - accessible programs to be developed by all operators
March 1976	Santa Rosa City Council resolved that Transit system should "meet special needs of E&H."
April 1976	Santa Clara Board of Supervisors approved "fully accessible public transportation"
April 1976	Executive Order 11914 - all Federal departments to prepare 504 Regulations.

April 1976	UMTA issued regulations on "Transportation for E&H Persons"
June 1976	MTC Resolution 316 on E&H Advisors to Commission
June 1976	Santa Clara demonstrated its prototype Transit-Elevator (TE) lift
Summer 1976	MTC conducted survey and inventory of transportation needs of social service agencies
August 1976	UMTA policy statement on improvements in bus design
Sept. 1976	SF- PUC approved accessibility study for Muni Metro and policy of accessible vehicles for entire Railway.
Oct. 1976	MTC Special Needs Program published its first newsletter
Oct. 1976	Solano EOC Project Move began operation
Oct. 1976	UMTA proposed Paratransit Policy - never finalized
late 1976	Tri-City (Napa County) DAR began service for the handicapped
Jan. 1977	"Progress Report" to MTC's Grant Review Committee on compliance by area operators with Resolution No. 299
Jan. 1977	AC Transit and Napa County approved work programs for E&H Studies

Jan. 1977	Canon Kip in San Francisco MTC grant to prepare training manual for drivers and to test dispatching systems.
Jan. 1977	TDA Article 4.5 became effective
March 1977	SamTrans Reditwheels program began operations
March 1977	Marin County "Analysis of Needs" Report published
April 1977	San Mateo policy of "lift equipment on all new buses"
1977	Santa Clara ESO (Economic and Social Opportunities, Inc.) escort service & coordination project began
May 1977	Transbus mandated by USDOT Secretary Adams
June 1977	Caltrans/Dept. of Rehabilitation Agreement to "foster improved mobility"
June 1977	Sonoma County Supervisors began E&H Study
June 1977	Muni Metro Study completed
June 1977	Central & Eastern Contra Costa agencies organized Task Force on Transportation
July 1977	MTC Social Service Agency Survey Report issued (1st edition)
July 1977	Canon Kip began Project Transportation service

Aug. 1977	MTC Resolution 468 - established Paratransit Coordinating Council (PCCs) within counties.
Aug. 1977	"Transportation Services for the E&H: Marin County" presented to Joint Powers agencies
Sept. 1977	MTC Resolution 467 - MTC will only approve funding for accessible buses after Oct. 1978
Oct. 1977	AC Transit E&H Study submitted
Oct. 1977	AC Transit Board approved policy "all buses purchased in the future be accessible to wheelchair users"
Nov. 1977	AC Transit approved "low capital" package of priority seating, teletypewriter, outreach, and driver training.
Nov. 1977	GGBHTD voted to purchase 30 accessible buses
Jan. 1978	Alameda County approved paratransit brokerage plan
Jan. 1978	HEW issued 504 Standards for other federal departments
Feb. 1978	Santa Clara established Task Force to set up goals and structure for PCC
March 1978	Napa County Transit Special Needs Study began
March 1978	Marin County (Draft) Implementation Plan issued
April 1978	BART Impact Program issued Technical Memo on "Mobility & Accessibility for the Transportation Dependent"

April 1978	Concord & AC Transit began "Dial-A-Ride" type service
June 1978	UMTA issued draft 504 regulations
July 1978	SamTrans puts 24 accessible buses into Mainline Service; Redi-Wheels service expanded into Half Moon Bay
July 1978	San Mateo & Napa County PCCs established
Aug. 1978	SF-PUC approved purchase of 25 accessible buses
Sept. 1978	UMTA amends vehicle regulations to allow ramp or lift at front door
Oct. 1978	Santa Rosa began accessible service to Windsor
Nov. 1978	Napa County DAR received accessible bus
Dec. 1978	Sonoma County PCC approved
Dec. 1978	SF-PUC approved plan to retrofit 50 trolley-buses
Dec. 1978	PENTAP Transit Dependent Study issued
Jan. 1979	East Contra Costa Transit Authority (Tri-Delta) began service
Jan. 1979	Sonoma County Final Report & Plan adopted
Jan. 1979	San Francisco E&H Study Report completed
Jan. 1979	Santa Clara ordered 50 General Motors buses with rear- door lifts

Feb. 1979	Alameda and Contra Costa Counties approved PCCs
March 1979	Santa Clara received 52 Gilligs with front passive lifts; Line 64 became accessible
March 1979	SF PCC approved
April 1979	"Tentative Final" 504 Regulations sent to HEW for approval
June 1979	MTC Resolution No. 679 - formalized policy on allocation and use of TDA Article 4.5 funds
July 1979	USDOT 504 Regulations became effective
July 1979	MTC issued Regional E&H Plan - adopted by Resolution No. 714

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APPENDIX 3

WHEELCHAIR - ACCESSIBLE PUBLIC TRANSPORTATION

IN THE BAY REGION

A. "FIXED ROUTE" SYSTEMS

- 1) BART (Bay Area Rapid Transit District)
71 miles of rapid service with 34 stations in 4 counties. Independent wheelchair access is possible at all parking lots, stations and rail cars.
- 2) BART Shuttles - El BARTito and AirBART
Operates between Hayward BART station and Alameda County offices and from Coliseum station to Oakland Airport on approximately 20-minute headways. One of the two buses on each route is lift-equipped (2 Argosy buses with TDT lifts.)
- 3) Santa Clara County Transit District
Routes 18 and 64 are currently served solely by lift-equipped buses. Lines 62 and 66 are expected to be similarly served by the end of calendar 1979. District policy is to make one route at a time fully accessible. (13 Gillig buses with TDT lifts in service as of May 1979 - 52 accessible Gilligs in current delivery.)
- 4) San Mateo County Transit District (SamTrans)
Mainline accessible service operates from Daly City BART station to Half Moon Bay via Routes 1A, and 1C and 1H (coast routes); and to Palo Alto via Route 5L (El Camino). On weekends and holidays, 5L is replaced by accessible service direct to San Francisco on Route 5M. (24 AM General Buses with TDT lifts.)
- 5) City of Walnut Creek
The City operates 8 buses on 3 commute and 4 midday routes. Half the buses are lift equipped. (4 Chance Minibuses with Flxible lifts.)
- 6) Care-A-Van (City of Sonoma)
Local service within Sonoma Valley operates as fixed route Monday through Thursday 9 a.m. to 5 p.m. and on demand-responsive basis Fridays. Fixed route service also operates to Oakmont two days a week to provide transfer to Santa Rosa Transit (2 lift-equipped vehicles: 1 22-passenger GMC bus; 1 Dodge van with E.E.C. lift)
- 7) Santa Rosa Transit
Routes 2A and 3A have been wheelchair accessible since late 1974. Route 9 to Windsor was added during 1978. (2FMC; 2 Mercedes with Collins lift.)
- 8) Golden Gate Ferries (GGBHTD)
Three of the District's ferry vessels and all three terminals (Sausalito, Larkspur, San Francisco) are wheelchair accessible. The Sausalito boat is being retrofitted to allow service to wheelchair passengers.

B. "DEMAND - RESPONSIVE" SYSTEMS

- 1) Redi-Wheels (San Mateo County)
Serves 4 target areas in County. Over 3600 mobility-impaired persons have registered for service. Operate 8:30 a.m. - 5:30 p.m. 5 days a week. (15 Mercedes buses with Collins lifts.)
- 2) South County "Handicoach" (Santa Clara County)
Serves Morgan Hill, San Martin, Gilroy. Operates 6 a.m. to 10 p.m. weekdays; special trips available on weekends. Will be connected to rest of County fixed route systems by accessible service during 1980. (1 Gillig with TDT lift.)
- 3) City of Hayward "Subsidized Taxi"
Accessible service provided by contract within Hayward and unincorporated areas of San Lorenzo and Castro Valley. Available only to wheelchair users who cannot transfer to regular vehicle. Operates 9:30 a.m. to 2:30 p.m. weekdays.
- 4) Oakland
Generally new program, currently limited to 100 resident wheelchair users. Operates under contract arrangement 7 days a week, 9 a.m. to midnight.
- 5) Center for Independent Living (Berkeley)
C.I.L. has been providing accessible service throughout Berkeley and other area of Alameda County with assistance from varied sources. Regular service hours are 9 a.m. to 5 p.m. weekdays. Effective FY 1979-80, the C.I.L. service will be incorporated into the TDA Article 4.5 program for North Alameda County. (14 lift vehicles)
- 6) El Cerrito
Serves elderly over 60 and handicapped on Dial-A-Ride and group-service basis. Emphasis is on lunch programs and senior centers. Operates Monday through Friday; schedule varies daily (1 Dodge van with Tommy lift.)
- 7) Walnut Creek Reserve-A-Ride
Door-to-door service within City 9 a.m. to 4 p.m. weekdays. Supplemented by accessible fixed-route during other hours (1 Chance bus with Vapor lift).
- 8) City of Concord
Operates within City limits, under contract by AC Transit. Service 6 a.m. to 5 p.m. weekdays -- can seat 3 or 4 wheelchairs (1 cut-down GMC bus with EEC lift).
- 8) Tri-Delta Transit (Eastern Contra Costa County)
Serves 90 square miles in Antioch, Pittsburg, Brentwood and surrounding areas. Operates 8:30 a.m. - 4:30 p.m. weekdays (4 Mercedes with Collins lifts.)
- 10) City of Fairfield DART
Operates total of 6 buses within City limits; 2 are lift-equipped. Service is provided 7 a.m. to 7 p.m. weekdays, 9 a.m. to 5 p.m. Saturdays (1 Far West converted van; 1 Mercedes with Collins lift.)

- 11) Solano County Project Move (Economic Opportunity Council)
Operates 14 vehicles (half are wheelchair-accessible) throughout County 6 a.m. to 6 p.m. weekdays. Provides demand-responsive service under contract with Vacaville, Dixon, Rio Vista, in some areas of Vallejo and to Solano Community College (7 Dodge vans with Tommy lifts.)
- 12) Napa County Dial-A-Ride
Serves approximately 100 square miles in unincorporated vicinity of City of Napa. Operates Monday through Friday, 8:30 a.m. to 5 p.m. (1 Superior coach with Collins lift).
- 13) Tri-City Bus (Volunteer Center of Napa County)
Operates in area of St. Helena, Calistoga and Angwin, 9 a.m. to 5 p.m. weekdays (1 Ford van with Tommy lift.)
- 14) Volunteer Wheels of Santa Rosa
Operates within Santa Rosa General Plan area, weekdays 8 a.m. to 5 p.m. (1 Dodge van with Tommy lift.)
- 15) City of Sebastopol
Contract service provided by Council on Aging; service area includes western Sonoma County between Russian River and Bodega. Operates Monday through Friday 8 a.m. to 5 p.m. (Dodge Maxi-van, lift unknown.)
- 16) Care-A-Van (City of Sonoma)
Demand responsive local service provided on Fridays between 9 a.m. and 4 p.m. (See "Fixed Route" entry for other operating times.)
- 17) Whistlestop Wheels (Marin Senior Coordinating Council/Indoor Sports Club)
Operates total of 19 passenger vehicles -- 3 are accessible. Provides trips for medical and daycare within Marin County and for shopping and recreation into San Francisco. Accessible service currently only along Highway 101 corridor (not West County). Operates 7:15 a.m. to 5:15 p.m. weekdays; charter services provided on weekends (3 Dodge vans -- 2 with Tommy lifts, 1 with EEC lift.)
- 18) Canon Kip Project Transportation (San Francisco)
Operates anywhere in City with 21 vehicles; charters out-of-town available on weekends. Currently takes trip reservations on same day notice, if called in before 8 a.m. Service hours are 7 a.m. to 10 p.m., 7 days a week (10 Dodge vans with EEC lifts; 1 Superior 16 - passenger bus with side lift.)

C. SERVICES TO BE IMPLEMENTED DURING 1979

Fixed Route

Santa Clara - Will add accessible service on Routes 62 (to Los Gatos) and 66 (to Fremont BART); priority of other routes not yet finalized.

Muni (San Francisco) and SamTrans - Will be receiving new accessible vehicles, but deployment plans have not been released.

BART Express Buses - Contract routes operated by AC Transit in Alameda and Contra Costa counties; 36 buses will be retrofitted.

City of Napa - Will retrofit their 5-bus system with Vapor-lifts.

St. Helena - One route to be implemented during Summer 1979.

Demand Responsive

West CAT (Western Contra Costa Transit Authority)
Service is planned throughout Pinole, Hercules, Rodeo, Crockett, and vicinity. Will have 3 lift equipped Fortibuses.

"Subsidized Taxi" Expansions
Under Article 4.5 of California Transportation Development Act, funds are provided for "Community Transit Services." Many cities have established programs aimed at increasing local E&H mobility. Cities and county areas that plan to incorporate a wheelchair-accessible component into their Article 4.5 services FY 1979-80 include:

Alameda County: Northern County Area (Albany, Berkeley, Emeryville, Oakland north of Fruitvale Ave.)
Albany
Berkeley
Fremont/Newark
Hayward "expansion" (unincorporated areas of Ashland, Castro Valley, Cherryland, San Lorenzo)
Livermore - Amador Valley (includes Dublin, Pleasanton, Sunol)
Piedmont

Contra Costa County: Richmond/San Pablo
San Ramon (as part of Amador Valley service in Alameda County)

Santa Clara County: Los Gatos/Saratoga/Monte Sereno
Palo Alto
San Jose

APPENDIX 4

Handicapped and Senior Citizen Advisors to MTC Commissioners (Listed by County of Residence)

<u>County</u>	<u>Handicapped Advisors</u>	<u>Senior Advisors</u>
Alameda	Ms. Margaret Emory Mrs. Alice Johnston Ms. Kathleen Lankasky	Dr. Milton Chernin
Contra Costa	Mr. Russell Beeson Mr. Harold Willson Ms. Corinne Vieville	Mr. Hank Bennett Mr. Harwood Huffcut Ms. Delma Webb
Marin	Mr. Fred Zimback	
Napa	Ms. Jan Browne	Ms. Leah Heston
San Francisco	Ms. Gay Blackford Mr. John Edmonds	Mr. Earl Cranshaw Mr. Farrar Dodge Mrs. Miriam Pearson
San Mateo	Ms. Judy Grisell Mr. Chuck Williams	Ms. Miriam Gholikely
Santa Clara	Ms. Susan Davidson Mr. Wally Skeels	Mr. Ray Snyder
Solano	Mr. Charles Van Housen	Mr. William Langhauser
Sonoma	Mr. Will Johnson	Mr. Carl Medford

APPENDIX 5

SUMMARY

Social Service Agencies that Own Wheelchair-Accessible Vehicles

	<u># Agencies</u>	<u># Vehicles</u>
ALAMEDA COUNTY	17	28
CONTRA COSTA COUNTY	33	55
MARIN COUNTY	9	20
NAPA COUNTY	6	12
CITY & COUNTY OF SAN FRANCISCO	18	46
SAN MATEO COUNTY	6	15
SANTA CLARA COUNTY	19	83
SOLANO COUNTY	7	18
SONOMA COUNTY	<u>21</u>	<u>43</u>
REGIONAL TOTAL	<u>136</u>	<u>320</u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

ALAMEDA COUNTY

<u>City</u>		<u>No. of Vehicles</u>
Alameda	City of Alameda Recreation & Parks Department	1
	City of Alameda School District	1
Albany	City of Albany Parks & Recreation Department	1
Berkeley	City of Berkeley Health Department	3
	City of Berkeley Young Adult Project	1
	Berkeley Outreach Recreational Program, Inc.	2
	Herrick Hospital	1
Fremont	Fremont School District/CCS Medical Therapy	1
Hayward	Bay Area Transportation Corporation	2
	Handicapped Recreation Center	1
	Project Eden	1
	Self-Dependence for the Handicapped	2
Oakland	Medi-Hop	3
	Oakland Parent Child Development, Inc.	1
Pleasanton	City of Pleasanton Recreation Department	1
San Leandro	Fairmount Hospital	1
	Patients' Shuttle Service	<u>5</u>
TOTAL IN COUNTY		<u>28</u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

CONTRA COSTA COUNTY

<u>City</u>		<u>No. of Vehicles</u>
Antioch	City of Antioch Committee on Aging	1
	City of Antioch Nutrition Program	1
	City of Antioch Senior Drop-In Center	1
Concord	Concord Senior Citizens' Center	1
	Michael's Ambulance Service	1
	Mt. Diablo Unified School District	4
	Mt. Diablo Unified Schools (Shadelands School)	3
	We Care Center	1
Crockett	John Swett Unified School District	1
El Cerrito	Cameron School for Orthopedically Handicapped	1
	Christ Lutheran Senior Center	1
	El Cerrito Community Center	1
	El Cerrito Senior Citizens' Club	1
	St. John's Senior Center	1
El Sobrante	Boys' Club of El Sobrante	1
Martinez	Community College District	2
Pacheco	Ambulance Cab Service	3
Pittsburg	Contra Costa Association for Mentally Retarded	1
Pleasant Hill	City of Pleasant Hill, Recreation & Parks	2
	Diablo Valley College	4
	Mt. Diablo Rehabilitation Center	1
	Pleasant Hill Community Center	1
Richmond	City of Richmond	1
	Contra Costa County Medical Services/Outpatient	4
	Handyman Service, Southside Center	1
	Richmond Drop-In Center	2
	Richmond Housing Authority	2
	Richmond Unified School District	4
	West Contra Costa Community Health Care	1
Walnut Creek	Contra Costa County Association for Mentally Retarded	2
	Contra Costa County Center for Human Development	1
	Contra Costa County Schools/Special Day Class	1
	Geary House Respite Center	2

TOTAL IN COUNTY 55

Social Service Agencies that Own
Wheelchair Accessible Vehicles

MARIN COUNTY

<u>City</u>		<u>No. of Vehicles</u>
Corte Madera	Marin County Schools, Physically Disabled Program	12
Greenbrae	Marin Community Mental Health	1
Marshall	Synanon Foundation	1
Mill Valley	Nursing Dynamics Corporation	1
Ross	Ross General Hospital - Alcoholism	1
San Anselmo	Volunteer Bureau of Marin	1
San Rafael	Boy Scouts of America, Marin Council	1
	Family Service Agency	1
	First Presbyterian Church	<u>1</u>
TOTAL IN COUNTY		<u>20</u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

NAPA COUNTY

<u>City</u>		<u>No. of Vehicles</u>
Deer Park	St. Helena Hospital	2
Imola	Napa State Hospital	2
Napa	Napa County Council on Economic Opportunity	1
	Napa County Schools/Special Education	5
	Napa Valley Unified School District	1
Yountville	Veterans' Home of California	<u>1</u>
TOTAL IN COUNTY		<u><u>12</u></u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

CITY & COUNTY OF SAN FRANCISCO

	<u>No. of Vehicles</u>
City of San Francisco, Commission on Aging	7
American Ambucar Service	13
Catholic Youth Organization	1
Family Service Agency	1
Garden Sullivan Rehabilitation Center	1
Goodwill Industries	1
Jewish Home for Aged/Day Care Program	1
Kimochi, Inc.	1
On Lok Senior Health Service	2
Ralph K. Davies Medical Center	1
Retired Senior Volunteer Program	1
San Francisco County Health Department/Mental Health	1
San Francisco Independent Living Project	1
San Francisco Public Schools - O.M.I. College Center	1
San Francisco Public Schools - Sunshine School	3
San Francisco Public Schools - Transportation Department	8
Sex and Disability Program	1
United Cerebral Palsy Association	<u>1</u>
TOTAL IN CITY & COUNTY	<u>46</u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

SAN MATEO COUNTY

<u>City</u>		<u>No. of Vehicles</u>
Burlingame	Golden Gate Recreational Center	4
East Palo Alto	Charles R. Drew Health Center	1
Foster City	Handicapped Travelers' Association	7
Menlo Park	Peninsula Volunteers/Little House	1
San Bruno	Skyline College	1
San Mateo	Crystal Springs Rehabilitation Center	<u>1</u>
TOTAL IN COUNTY		<u><u>15</u></u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

SANTA CLARA COUNTY

<u>City</u>		<u>No. of Vehicles</u>
Cupertino	De Anza College	11
Los Altos Hills	Foothill College, Enabler Services	1
Palo Alto	Children's Hospital at Stanford	2
	Palo Alto Ambulance	2
	Veteran's Administration Hospital	2
San Jose	Agnew State Hospital	2
	Alexian Brothers Hospital	1
	Atypical Infant Motivation Program	1
	Della Maggiore Center for Handicapped	25
	Economic and Social Opportunity	1
	Hope Rehabilitation	2
	Medi-Car	12
	National Multiple Sclerosis Society	2
	O'Conner Hospital	2
	Santa Clara County Health Department/Alcohol	1
	Second Start - Learning Disabilities	1
	Special Schools/Santa Clara County	12
	Twelveacres, Inc.	1
Saratoga	West Valley College	<u>2</u>
	TOTAL IN COUNTY	<u>83</u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

SOLANO COUNTY

<u>City</u>		<u>No. of Vehicles</u>
Fairfield	Solano County 4-H Club	3
	Solano County Supt. of Schools	4
Suisun	Solano Community College/Enabler	4
Vallejo	Carol Vista School for Orthopedically Handicapped	
	Leapfrog Infant/Toddler Development	2
	North Bay Regional Center	2
	Vallejo Unified School District	<u>2</u>
	TOTAL IN COUNTY	<u>18</u>

Social Service Agencies that Own
Wheelchair Accessible Vehicles

<u>City</u>	<u>SONOMA COUNTY</u>	<u>No. of Vehicles</u>
Cloverdale	Cloverdale Care-A-Van	1
Eldridge	Sonoma State Hospital - Central Program	2
	Sonoma State Hospital - Dept. of Health	3
Healdsburg	City of Healdsburg, Parks & Recreation Dept.	2
Santa Rosa	Child Development Centers, Sonoma County Office of Education	4
	Community Resources for Independence	1
	Easter Seal Society	1
	FISH - Santa Rosa	2
	Grace Reese Development Center	4
	Handicapables in the Redwood Empire	5
	Santa Rosa City Schools	6
	Santa Rosa Junior College	1
	Santa Rosa Memorial Hospital	1
	Senior Opportunities Service	1
	Sonoma County Council on Aging	1
	Sonoma County Drug Abuse Council	1
	Sonoma County Social Service Department	1
	Volunteer Wheels	1
Sebastopol	Azure Acres	1
Sonoma	Sonoma RSVP	3
	Sonoma Valley Hospital	<u>1</u>
TOTAL IN COUNTY		<u>43</u>

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